Highways Safety Solutions

www.glasdon.com
Passively Safe street furniture is designed to minimise the severity of injury to occupants of a vehicle that collides with it. The European Standard BS EN 12767 defines a universal test that establishes the performance of a passively safe roadside structure.

The performance rating is displayed in the following format:

The first number indicates the class impact speed in kph: 50, 70 or 100kph. Tests are conducted with a small (900kg) car in a head-on, frontal impact.

The two letters represent the energy absorbed by the structure: High energy absorbing (HE) support structures slow the vehicle considerably on impact; Low energy (LE) structures measurably slow the vehicle but pose a much lower risk of injury to its occupants; Non-energy absorbing (NE) structures have negligible or nil effect on the speed of the vehicle.

The final number represents the occupant safety level and is based on the Acceleration Severity Index (ASI) and Theoretical Head Impact Velocity (THIV) scales, according to European Standard BS EN 1317-1. The available levels are 1-4, where Level 4 represents the safest and Level 1 the most dangerous.

Glasdon passively safe highways products are tested by accredited independent specialists at MIRA and TRL. Where testing has been conducted, the performance rating will be clearly shown on the page.
At Glasdon we have been designing and manufacturing bollards for more than 40 years. Our versatile road safety solutions are used all over the highways and byways of the United Kingdom, and we like to think we have a product for every application. With a variety of traditional and modern styles, in rigid Durapol® material and flexible Impactapol® material and also a wide choice of fixing options to suit your requirements.
Advanced Neopolitan™ 150 Bollard

DESIGN FEATURES
• Available as a self-righting Rebound bollard or rigid Durapol® Material model.
• Choice of two fixing options - LockFast Socket System or permanent below-ground extended base fixing.
• Large 150mm reflective top patches.
• Larger 40mm lower reflector catches dipped headlights.
• Individual reflectors offer enhanced drive-through performance.
• LockFast Socket allows quick and easy bollard top replacement.
• Optional socket blanking cap available.

SPECIFICATIONS
- Height above ground: 925mm
- Maximum diameter: 200mm
- Socket depth below ground: 350mm
- Extended base depth below ground: 300mm

*Rebound Impactapol model only.
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material

OPTIONAL BANDING
A. 2 x 150mm and 2 x 40mm Red/White retroreflective patches
B. 2 x 150mm and 2 x 40mm Red retroreflective patches
C. 2 x 150mm and 2 x 40mm White retroreflective patches
D. 2 x 150mm and 2 x 40mm Amber retroreflective patches

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

FIXING OPTIONS
Glasdon Manchester™ Bollard

DESIGN FEATURES
• Available as a self-righting Rebound bollard or rigid Durapol® material model.
• Never requires painting - unlike cast iron equivalents.
• A fraction of the weight of a metal bollard - can be installed by one person.
• Existing cast iron bollards can be replaced over time to save cost.
• Recessed areas for retroreflective or decorative banding.
• LockFast Socket allows quick and easy bollard top replacement.
• Optional socket blanking cap available

SPECIFICATIONS
Height above ground: 1005mm
Maximum diameter: 220mm
Socket depth below ground: 350mm
Extended base depth below ground: 300mm

*Rebound Impactapol model only.

Passively Safe to BS EN 12767
PASSED at 100 Km/h (62mph)
**MATERIAL & COLOUR OPTIONS**
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.

**OPTIONAL BANDING**
A. 1 x 63mm and/or up to 3 x 12mm Red/White retroreflective bands#
B. 1 x 63mm and/or up to 3 x 12mm Red retroreflective bands#
C. 1 x 63mm and/or up to 3 x 12mm White retroreflective bands#
D. 1 x 63mm and/or up to 3 x 12mm Amber retroreflective bands#
E. 1 x 63mm and/or up to 3 x 12mm Gold Decorative bands

#All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

**FIXING OPTIONS**
Neopolitan™ 150 Bollard

DESIGN FEATURES
• Available as a self-righting Rebound bollard or rigid Durapol® material model.
• Recessed areas for retroreflective or decorative banding.
• Wide range of fixing options available.
• Optional socket blanking cap available.

SPECIFICATIONS
Height above ground:
(socketed/extended base/guardsman models) 925mm
(bolt-down) 1005mm
Maximum diameter: 200mm
Socket depth below ground: 500mm
Extended base depth below ground: 420mm
Guardsman fixing depth below ground: 745mm
Bridgemaster fixing depth below ground: 300mm
Bolt-down fixing depth: 75mm
Adjustable depth concrete-in anchors:
Maximum depth: 320mm

*Rebound Impactapol model only.
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material.
Durapol® Material: Black, White, Millstone, Sandstone, Dark Blue, Stone.
(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

OPTIONAL BANDING
A. 1 x 150mm and 1 x 20mm Red/White retroreflective bands
B. 1 x 150mm and 1 x 20mm Red retroreflective bands
C. 1 x 150mm and 1 x 20mm White retroreflective bands
D. 1 x 150mm and 1 x 20mm Amber retroreflective bands
E. 1 x 485mm Red/White body sleeve (3 x 150mm bands are available for use with Rebound model)
F. 1 x 485mm Amber body sleeve (3 x 150mm bands are available for use with Rebound model)
G. 1 x 150mm and 1 x 20mm decorative bands
150mm band is ideal for personalisation with your crest, logo or message.

FIXING OPTIONS
600mm High Neopolitan™ 150 Bollard

DESIGN FEATURES
• Designed for improved visibility at junctions.
• Rebound and rigid models available.
• Recessed areas for retroreflective or decorative banding.
• Co-ordinates with Neopolitan 150 and Neopolitan 20 Bollards

SPECIFICATIONS
Height above ground: 612mm
Maximum diameter: 200mm
Bolt-down fixing depth: 75mm
Adjustable depth concrete-in anchors:
Maximum depth: 320mm

*Rebound Impactapol model only.

Passively Safe to BS EN 12767 NE4 100* at 100 Km/h (62mph)
PASSED

www.glasdon.com
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material

OPTIONAL BANDING
A. 1 x 150mm and 1 x 20mm Red/White retroreflective bands
B. 1 x 150mm and 1 x 20mm Red retroreflective bands
C. 1 x 150mm and 1 x 20mm White retroreflective bands
D. 1 x 150mm and 1 x 20mm Amber retroreflective bands
E. 1 x 150mm and 1 x 20mm decorative bands

150mm band is ideal for personalisation with your crest, logo or message.

All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

FIXING OPTIONS
# Neopolitan™ 20 Bollard

## DESIGN FEATURES
- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- Recessed areas for retroreflective or decorative banding.
- Wide range of fixing options available.
- Optional socket blanking cap available.

## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height above ground</td>
<td>925mm</td>
</tr>
<tr>
<td>Maximum diameter</td>
<td>200mm</td>
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<tr>
<td>Socket depth below ground</td>
<td>500mm</td>
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<tr>
<td>Extended base depth below ground</td>
<td>420mm</td>
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<tr>
<td>Guardsman fixing depth below ground</td>
<td>745mm</td>
</tr>
<tr>
<td>Bridgemaster fixing depth below ground</td>
<td>300mm</td>
</tr>
<tr>
<td>Bolt-down fixing depth</td>
<td>95mm</td>
</tr>
<tr>
<td>Adjustable depth concrete-in anchors</td>
<td></td>
</tr>
<tr>
<td>Maximum depth</td>
<td>250mm</td>
</tr>
</tbody>
</table>

*Rebound Impactapol model only.

[Passively Safe to BS EN 12767 100+ NE4](#)

[Passed at 100 Km/h (62mph)](#)

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Passively Safe to BS EN 12767 100+ NE4

Passed at 100 Km/h (62mph)
**MATERIAL & COLOUR OPTIONS**

Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material.

**Durapol® Material:** Black, White, Millstone, Sandstone, Dark Blue, Stone.
**Passively Safe Rebound Impactapol® Material:** Black, White.

(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

**OPTIONAL BANDING**

- **A.** 2 x 20mm Red/White retroreflective bands
- **B.** 2 x 20mm Red retroreflective bands
- **C.** 2 x 20mm White retroreflective bands
- **D.** 2 x 20mm Amber retroreflective bands
- **E.** 1 x 485mm Red/White body sleeve (3 x 150mm bands are available for use with Rebound model)
- **F.** 1 x 485mm Amber body sleeve (3 x 150mm bands are available for use with Rebound model)
- **G.** 2 x 20mm Gold decorative bands

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.*

**FIXING OPTIONS**

**Durapol® Material:** Standard Socket, Below Ground Extended Base, Bolt-Down Fixing, Bolt-Down Fixings with optional adjustable depth concrete in anchors, Guardsman, Bridgemaster.

**Passively Safe Rebound Impactapol® Material:** Below Ground Extended Base.
**Admiral™ Bollard**

**DESIGN FEATURES**
- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- 80mm (Rigid) or 150mm (Rebound) banding recess.
- Optional socket blanking cap available.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height above ground</td>
<td>936mm</td>
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<tr>
<td>Maximum diameter</td>
<td>198mm</td>
</tr>
<tr>
<td>Socket depth below ground</td>
<td>500mm</td>
</tr>
<tr>
<td>Extended base depth below ground</td>
<td>300mm</td>
</tr>
</tbody>
</table>

*Rebound Impactapol model only.

**Passively Safe to BS EN 12767 100* NE4**

**PASSED at 100 Km/h (62mph)**

Glasdon focus on Highly Visible Junction Marker Bollards for Somerset County Council.

**What the Customer says:**
“Somerset County Council have found the Admiral junction marker to be a useful tool in their armoury, as part of integrated route treatment works in rural locations. It has been effective in reducing road accident casualties and gives drivers enhanced information on road layouts and potential hazards.”

Mr Nick Cowling, Team Leader Accident Data and Engineering, Somerset.
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material.
(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

OPTIONAL BANDING
A. 1 x 80mm Red/White retroreflective band
B. 1 x 80mm Red retroreflective band
C. 1 x 80mm White retroreflective band
D. 1 x 80mm Amber retroreflective band
E. 1 x 150mm Red/White retroreflective band
*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.
* Available with the self-righting Rebound model only.

FIXING OPTIONS
Durapol® Material: Standard Socket, Below Ground Extended Base
Passively Safe Rebound Impactapol® Material: Below Ground Extended Base.
Victory™ Bollard

DESIGN FEATURES
• Available as a self-righting Rebound bollard or rigid Durapol® material model.
• Never requires painting - unlike cast iron equivalents.
• A fraction of the weight of a metal bollard - can be installed by one person.
• Recessed areas for retroreflective or decorative banding.
• Optional socket blanking cap available.

SPECIFICATIONS
Height above ground: 967mm
Maximum diameter: 200mm
Socket depth below ground: 500mm
Extended base depth below ground: 420mm

*Rebound Impactapol model only.

Passively Safe to BS EN 12767 100* NE4

PASSED at 100 Km/h (62mph)
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material

OPTIONAL BANDING
A. 1 x 125mm and/or 1 x 20mm and/or 1 x 38mm Red/White retroreflective bands
B. 1 x 125mm and/or 1 x 20mm and/or 1 x 38mm Red retroreflective bands
C. 1 x 125mm and/or 1 x 20mm and/or 1 x 38mm White retroreflective bands
D. 1 x 125mm and/or 1 x 20mm and/or 1 x 38mm Amber retroreflective bands
E. 1 x 125mm and/or 1 x 20mm and/or 1 x 38mm Gold decorative bands

125mm band is ideal for personalisation with your crest, logo or message.

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

FIXING OPTIONS
Passively Safe Rebound Impactapol® Material: Below Ground Extended Base.
Jubilee™ Bollard

DESIGN FEATURES
• Available as a self-righting Rebound bollard or rigid Durapol® material model.
• Never requires painting - unlike cast iron equivalents.
• A fraction of the weight of a metal bollard - can be installed by one person.
• Versatile banding options.
• Optional socket blanking cap available.

SPECIFICATIONS
- Height above ground: 942mm
- Maximum diameter: 190mm
- Socket depth below ground: 500mm
- Extended base depth below ground: 420mm

*Rebound Impactapol model only.

Passively Safe to BS EN 12767 100 NE4

PASSED at 100 Km/h (62mph)
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material

OPTIONAL BANDING
A. 4 x 12mm and/or 1 x 27mm Red/White retroreflective bands
B. 4 x 12mm and/or 1 x 27mm Red retroreflective bands
C. 4 x 12mm and/or 1 x 27mm White retroreflective bands
D. 1 x 580mm Red/White body sleeve, 4 x 12mm and 1 x 27mm retroreflective bands
E. 1 x 580mm Amber body sleeve, 4 x 12mm and 1 x 27mm retroreflective bands
F. 4 x 12mm Gold decorative bands.

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

FIXING OPTIONS
Passively Safe Rebound Impactapol® Material: Below Ground Extended Base.
Warn, inform and protect road users, cyclists and pedestrians with Glasdon sign carrying bollards. Perfect for marking dedicated cycle paths and shared routes.

Rigid and rebound models are available to co-ordinate with our range of Neopolitan Bollards.
Infomaster™ Bollard

DESIGN FEATURES
- Rigid Durapol® Material construction.
- Optimum height for drivers.
- Narrow footprint takes up minimal space on the pavement.
- Double-sided signface helps to reduce cost.
- Recessed signface deters vandalism.
- Easily re-sited.
- Choice of fixing options available.

SPECIFICATIONS
- Height above ground: 1195mm
- Width: 370mm
- Sign face dimensions: 308mm x 248mm
- Bolt-down fixing depth: 75mm
- Adjustable depth concrete-in anchors:
  - Maximum depth: 320mm

MATERIAL & COLOUR OPTIONS
Durapol® Material in Black, Millstone.

FIXING OPTIONS
Bolt-Down Fixing, Bolt-Down Fixing with adjustable depth concrete in anchors.

SIGNFACE OPTIONS
Available single or double sided and with optional side reflectors. Informaster can be used for a range of applications, please see above for examples. To discuss your requirements please telephone our sales office on 01253 600411.

SIGNFACE ORIENTATION
If Informaster is to be sited against a building/wall please specify that the signface is for the back of the bollard.
Ensign™ Bollard

DESIGN FEATURES
• Rigid Durapol® Material construction.
• Wide range of signface options.
• Recessed areas for retroreflective or decorative banding.
• Choice of fixing options available.
• Optional socket blanking cap available.

SPECIFICATIONS
Height above ground:
(socketed) 1120mm
(bolt-down) 1206mm
Width: 338mm
Maximum stem diameter: 200mm
Sign face diameter: 300mm
Socket depth below ground: 500mm
Extended base depth below ground: 420mm
**MATERIAL & COLOUR OPTIONS**

Socket: Durapol® Material.

(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

**OPTIONAL BANDING**
- A. 2 x 20mm Red/White retroreflective bands
- B. 2 x 20mm Red retroreflective bands
- C. 2 x 20mm White retroreflective bands
- D. 2 x 20mm Amber retroreflective bands
- E. 1 x 485mm Red/White body sleeve
- F. 1 x 485mm Amber body sleeve
- G. 2 x 20mm Gold decorative bands

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.*

**STANDARD PRICE SIGN OPTIONS**
1. Max. Speed Limit (5mph)
2. Max. Speed Limit (10mph)
3. No Entry
4. No Left Turn
5. Cycles Prohibited
6. Turn Left
7. Keep Left
8. Cycle Route
9. Cycle/Pedestrians Only
10. Cycle/Pedestrians Only “Route Marked”
11. Cycle/Pedestrians Only “Route Marked” reversed
12. In*
13. Out*
14. Waymark
15. Disabled Sign

* For use on the public highway these options require prior approval from the DfT. All other standard options conform fully with the TSRGD.
Mini Ensign™ Bollard

**DESIGN FEATURES**
- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- Illuminated rebound model available.
- Wide range of signface options.
- Recessed areas for retroreflective or decorative banding.
- Choice of fixing options available.
- Optional socket blanking cap available.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height above ground:</td>
<td></td>
</tr>
<tr>
<td>(socketed)</td>
<td>1010mm</td>
</tr>
<tr>
<td>(bolt-down)</td>
<td>1087mm</td>
</tr>
<tr>
<td>Maximum diameter:</td>
<td>200mm</td>
</tr>
<tr>
<td>Sign face diameter:</td>
<td>150mm</td>
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<tr>
<td>Socket depth below ground:</td>
<td>500mm</td>
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<tr>
<td>Extended base depth below ground:</td>
<td>420mm</td>
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<tr>
<td>Bolt-down fixing depth:</td>
<td>75mm</td>
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<tr>
<td>Adjustable depth concrete-in anchors:</td>
<td></td>
</tr>
<tr>
<td>Maximum depth:</td>
<td>320mm</td>
</tr>
</tbody>
</table>

*Rebound Impactapol model only.*

Passively Safe to BS EN 12767

100° NE4

PASSED at 100 Km/h (62mph)
MATERIAL & COLOUR OPTIONS
Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material.
Passively Safe Rebound Impactapol® Material: Black, White. Mini Ensign illuminated rebound bollard is only available in White.
(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

OPTIONAL BANDING
A. 2 x 20mm Red/White retroreflective bands
B. 2 x 20mm Red retroreflective bands
C. 2 x 20mm White retroreflective bands
D. 2 x 20mm Amber retroreflective bands
E. 1 x 485mm Red/White body sleeve
(3 x 150mm bands are available for use with Mini Ensign Rebound models)
F. 1 x 485mm Amber body sleeve
(3 x 150mm bands are available for use with Mini Ensign Rebound models)
G. 2 x 20mm Gold decorative bands
H. 2 x 20mm Red/White translucent retroreflective bands (for use with Mini Ensign illuminated rebound bollard)

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

STANDARD PRICE SIGN OPTIONS
1. Cycle Route
2. Cycle/Pedestrians Only
3. Cycle/Pedestrians Only “Route Marked”
4. Cycle/Pedestrians Only “Route Marked” reversed
5. Waymark

Sign carrying bollards are also suitable for personalisation with safer routes to schools or your crest, logo or message. Please phone 01253 600411 for more information.

Also see page 42 & 43 for Glenwood™ range with sign carrying options
Neopolitan Signhead™ Bollard

DESIGN FEATURES
- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- Wide range of signface options.
- Recessed areas for retroreflective or decorative banding
- Choice of fixing options available.
- Optional socket blanking cap available.

SPECIFICATIONS
- Height above ground:
  (socketed) 1075mm
  (bolt-down) 1156mm
- Maximum diameter: 200mm
- Sign face dimensions: 125mm x 210mm
- Socket depth below ground: 500mm
- Extended base depth below ground: 420mm
- Bolt-down fixing depth: 75mm
- Adjustable depth concrete-in anchors: Maximum depth: 320mm

*Rebound Impactapol model only.
MATERIAL & COLOUR OPTIONS

Bollard: Passively safe Impactapol® Material or rigid Durapol® Material.
Socket: Durapol® Material.

(Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

OPTIONAL BANDING

A. 2 x 20mm Red/White retroreflective bands
B. 2 x 20mm Red retroreflective bands
C. 2 x 20mm White retroreflective bands
D. 2 x 20mm Amber retroreflective bands
E. 1 x 485mm Red/White body sleeve
   (3 x 150mm bands are available for use with Neopolitan Signhead Rebound models)
F. 1 x 485mm Amber body sleeve
   (3 x 150mm bands are available for use with Neopolitan Signhead Rebound models)
G. 2 x 20mm Gold decorative bands

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

STANDARD PRICE SIGN OPTIONS

1. Numbered Cycle Route
2. Waymark
3. Vehicles may be parked partially on verge or footway
4. End of area where vehicles may be parked partially on verge or footway
5. Vehicles may be parked wholly on verge or footway
6. End of area where vehicles may be parked wholly on verge or footway
Enviropol® recycled plastic material is manufactured predominantly from post-consumer plastics. By balancing these uncontaminated recycled waste materials, the result is a remarkably versatile product with many applications and benefits. Enviropol material will not chip or rust, is easy to clean and never needs painting.

Buffer™ Bollard is manufactured from 100% recycled rubber tyres and is pressure moulded to create a strong, hard-wearing, weatherproof material.
**Buffer™ Bollard**

**DESIGN FEATURES**
- Available in two heights - 600mm or 900mm.
- Reinforcing tube allows bollard to be flexible yet resilient.
- Recessed area for retroreflective or decorative banding.
- Made from 100% recycled rubber tyres.

**SPECIFICATIONS**
- Height above ground: 600mm or 900mm
- Maximum diameter: 248mm
- Extended base depth below ground: 300mm

**MATERIAL & COLOUR OPTIONS**
- Bollard: 100% recycled rubber car tyres in Black, Green.
- Reinforcing tube: Galvanised mild steel.

**FIXING OPTIONS**
Bolt-Down Fixing, Bolt-Down Fixing with adjustable depth concrete in anchors, Below Ground Extended Base.

**OPTIONAL BANDING**
- A. 1 x 75mm Red/White retroreflective band
- B. 1 x 75mm Red retroreflective band
- C. 1 x 75mm White retroreflective band
- D. 1 x 75mm Amber retroreflective band
- E. 1 x 75mm Gold decorative band

Ideal for personalisation with your crest, logo or message.

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.*

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www.glasdon.com
Enviropol® Bollard

**DESIGN FEATURES**
- Flat or round top model.
- Recessed area for retroreflective or decorative banding.
- 100% recycled material.
- Below-ground extended base fixing.

**SPECIFICATIONS**
- Height above ground: 1000mm
- Maximum diameter: 150mm
- Depth below ground: 500mm

**MATERIAL & COLOUR OPTIONS**
- Bollard: 100% recycled Enviropol®
- Material in Black.

**FIXING OPTIONS**
- Below Ground Extended Base.

**OPTIONAL BANDING**
- A. 1 x 80mm Red/White retroreflective band#
- B. 1 x 80mm Red retroreflective band#
- C. 1 x 80mm White retroreflective band#
- D. 1 x 80mm Amber decorative band
- E. 1 x 80mm Green decorative band
- F. 1 x 80mm Silver decorative band

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.
Road Safety Signs

For use on bends and roundabouts, the Glasdon Chevroflex Ultra™ chevron boards meet passive safety standards, are proven to prevent accidents and cut costs by outperforming traditional metal board and post chevron signs.

Chevroflex Ultra™ chevron boards are passively safe to BS EN 12767 for roundabouts and highlighting hazards on rural roads. Manufactured with Impactaflex™ material, they offer superior rigidity and resilience combined with class-leading recovery performance after a drive-through collision.
Chevroflex Ultra™ Sign System

**DESIGN FEATURES**
- Certified passively safe to Performance Standard NE3/100.
- Highly visible wall effect - offers a clear indication ahead of a bend or hazard in the road.
- Easy to install socket for quick and simple sign replacement.
- Three standard sizes of Chevron - 400mm, 600mm or 800mm.
- Modular socket design allows for unlimited number of Chevrons.
- Available as left-hand bend, right-hand bend, a roundabout unit with a statute-compliant 606 signface or a sight screen.
- Available with or without high-visibility border.
- AutoCAD model specifications available for all products.

**MATERIAL AND COLOUR OPTIONS**
- Uprights: Impactaflex™ Material
- Socket: Galvanized steel
- Uprights: Black.
- Hi-Vis surround: Yellow or Yellow/Green

Passively Safe to BS EN 12767

100 NE3
1 Specify the size of your Chevrons and the number of Chevrons.

- 400mm
- 600mm
- 800mm

2 Specify the configuration of your Chevrons -
- left hand bend
- right hand bend
- roundabout (with statute-compliant 606 sign face)

3 Choose with or without high visibility border -
Chevroflex Ultra with Hi-Vis surround is available with two different coloured borders, yellow/green and yellow.
Made in Avery Dennison fluorescent Diamond Grade material, it is highly visible and reflective from a distance.

4 For roundabouts choose 606 directional arrows.

- 600mm 606 for use on 400mm roundabouts
- 750mm 606 for use on 600mm roundabouts
- 900mm 606 for use on 800mm roundabouts
- 1200mm 606 for use on 800mm roundabouts

**FIXING**
The trench for the sockets should be 400mm deep, 350mm wide and 200mm longer than the overall length of the Chevroflex Ultra Sign.

*All retroreflective materials supplied by Glasdon UK are as recommended in table NA1 of the National Annex of BS EN 12899-1:2007 Fixed Vertical Road Signs.*
When Chevroflex is sited on a roundabout, diagram 606 sign must be illuminated.

Sublite Lumino™ Led Uplighter

**DESIGN FEATURES**
- Flush ground uplighter removes the potential impact hazard created by a traditional post-mounted downlighter.
- Low energy and low maintenance - only 12w power consumption.
- Highly resilient: 100% recycled Durapol polymer IP67 rated.
- Versatile: Hinged LED plate allows adjustment after installation.
- Designed to withstand accidental drive-over.
Glasdon hazard marker posts are ideal delineators for highlighting road layouts in urban traffic environments and bends on rural or trunk roads.

The Vergemaster RX™ Marker Post, is a passively safe verge marker with a wide-angle reflector and a range of fixing options to suit any terrain. For urban environments, the heavy duty, passively safe Hazardmaster™ Marker Post is robustly designed to withstand repeated wheel-over collisions.
Vergemaster RX™ Marker Post

DESIGN FEATURES
• Passively safe Reflexapol™ Material construction.
• Extended base fixing model successfully tested to Performance Standard NE4/100 by TRL.
• Two arced microprismatic Impactalight™ Reflectors increase reflective performance and viewing angles for clear delineation by day and night.
• Choice of fixing options available.

SPECIFICATIONS
Height above ground:
(extended base/stake type) 920mm
(bolt-down) 886mm
Maximum diameter: 167mm
Depth below ground:
(extended base) 350mm
(stake type) 523mm
(bolt-down) 100mm

*Below Ground Extended Base model only.

Passively Safe to BS EN 12767 NE4 PASSED at 100 Km/h (62mph)
MATERIAL OPTIONS
Marker post: Reflexapol™ Material
Fixing stake: Pressure-treated timber

VERGEMASTER REFLECTOR OPTIONS
A. Red & White
B. Amber & Amber

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

MOULDED-IN WHITE BAND
SECTION OF MATERIAL
Integral white bands fused to the post with HEAT and COMPRESSION.

FIXING OPTIONS
Below Ground Extended Base, Below Ground Stake Type, Bolt-Down Fixing, Bolt-Down Fixing with optional adjustable depth concrete in anchors
**Flexmaster™ Marker Post**

**DESIGN FEATURES**
- Manufactured from highly durable Ultraflex™ Material that will withstand multiple vehicle impacts.
- White band and reflector provide maximum visibility.
- Standard fixing can be installed in soft ground without the need for excavation. Advanced fixing provides a socket that allows the post to be easily removed and reinstated without ground works.
- Offers infinite possibilities for low-maintenance, high-visibility signage.

**SPECIFICATIONS**
- Height above ground: 905mm
- Height above ground layby variant: 600mm, 500mm or 480mm
- Width: 150mm
- Depth below ground:
  - (standard fixing) 405mm
  - (advanced fixing) 400mm

**MATERIAL OPTIONS**
- Advanced socket fixing: Galvanised steel.

**FIXING OPTIONS**
- Standard Fixing Option
- Advanced Fixing Option (socketed)

**FLEXMASTER REFLECTOR OPTIONS**
- Red & White
- Amber & Amber

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.*

**OTHER APPLICATIONS**
The versatility of the Flexmaster™ system offers infinite possibilities for low maintenance, high visibility signage. To discuss your requirements please telephone our highways safety sales team on 01253 600411.
Hazardmaster™ Marker Post

DESIGN FEATURES
• Passively safe Impactapol® Material construction for the highest risk areas.
• Successfully tested to Performance Standard NE4/100 by TRL.
• Substantial, robust marker post.
• Two large retroreflectors provide maximum visibility. Below-ground extended base fixing.

SPECIFICATIONS
Height above ground: 910mm
Maximum diameter: 150mm
Depth below ground: 300mm

MATERIAL OPTIONS
Marker post: Impactapol® Material

HAZARDMASTER REFLECTOR OPTIONS
*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.
Edgeliner™ Bollard

**DESIGN FEATURES**
- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- Recessed area for decorative or retroreflective banding (due to the low height of the bollard this is not approved for highways use).
- Co-ordinates with Neopolitan™ Bollards.
- Below-ground extended base fixing.

**SPECIFICATIONS**
- Height above ground: 510mm
- Maximum diameter: 140mm

**MATERIAL OPTIONS**
- Rebound Bollard: Impactapol® Material. (Black only).

**FIXING OPTIONS**
- Below Ground Extended Base.

**OPTIONAL BANDING**
- A. 1 x 19mm Red/White retroreflective band.
- B. 1 x 19mm Red retroreflective band.
- C. 1 x 19mm White retroreflective band.
- D. 1 x 98mm Red retroreflective band.
- E. 1 x 98mm White retroreflective band.
- F. 1 x 19mm Gold decorative band.

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.*
Edgemaster™ 20 Post

DESIGN FEATURES
- Recessed area for decorative or retroreflective banding (due to the low height of the post this is not approved for highways use).
- Ground level marker ensures the bollard is installed correctly.
- Below-ground extended base fixing available with or without optional ground fixing peg.

SPECIFICATIONS
- Height above ground: 490mm
- Maximum diameter: 105mm
- Depth below ground: 340mm

MATERIAL OPTIONS
- Post: Durapol® Material.

FIXING OPTIONS
- Below Ground Extended Base with optional ground fixing peg
- Below Ground Extended Base without ground fixing peg

OPTIONAL BANDING
- A. 1 x 20mm Red decorative band.
- B. 1 x 20mm Blue decorative band.
- C. 1 x 20mm Green decorative band.
- D. 1 x 20mm Amber decorative band.
- E. 1 x 20mm Black decorative band.
- F. 1 x 20mm Red retroreflective band.*

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.
Glenwood™ 150 Post

DESIGN FEATURES
- Manufactured from Everwood™ Material, which has a unique realistic timber grain effect.
- Lightweight and easy to install.
- Moulded-in saw grooves enable the post to be easily cut down to the desired height. Height options are 1000mm, 830mm and 500mm.
- Recessed area for retroreflective banding.
- 100mm vandal-resistant signfaces.
- Below-ground extended base fixing or below-ground extended base with fixing peg.

FIXING OPTIONS
Below Ground Extended Base, Below Ground Extended Base with Fixing Peg.

SPECIFICATIONS
- Height above ground: 500mm, 830mm or 1000mm
- Width: 150mm
- Depth below ground: 400mm to 650mm

MATERIAL OPTIONS
Bollard: Everwood Material.

OPTIONAL BANDING
- A. 1 x 37mm Red/White retroreflective band
- B. 1 x 37mm Red retroreflective band
- C. 1 x 37mm White retroreflective band

*All retroreflective materials meet the requirements in table NA1 of BS EN 12899-1:2007 Fixed Vertical Road Signs.

OPTIONAL SIGNFACES
- Ref 955
- Ref 956
- Ref 957
- Ref 957 Reversed
Glenwood™ 170 Post & Glenwood™ 170 Signhead Post

DESIGN FEATURES
• Two models available - Glenwood 170 Post and Glenwood 170 Signhead Post for displaying 150mm signs on all four sides.
• Manufactured from Everwood™ Material, which has a unique realistic timber grain effect.
• Lightweight and easy to install.
• Recessed area for retroreflective banding.
• 150mm vandal-resistant signfaces.
• Choice of two fixing options – Glenwood Socket System or permanent below-ground extended base.

SPECIFICATIONS
- Height above ground
  (Glenwood 170 Post): 1000mm
  (Glenwood 170 Signhead Post): 1093mm
- Width: 170mm
- Socketed depth below ground: 355mm
- Extended base depth below ground: 315mm

MATERIAL OPTIONS
- Bollard: Everwood Material.

FIXING OPTIONS
- Glenwood Socket
- Below Ground Extended Base

OPTIONAL BANDING
A. 1 x 37mm Red/White retroreflective band
B. 1 x 37mm Red retroreflective band
C. 1 x 37mm White retroreflective band

*All retroreflective materials supplied by Glasdon UK are as recommended in table NA1 of the National Annex of BS EN 12899-1:2007 Fixed Vertical Road Signs.
Unlike recycled PVC units on the market, the Glasdon Gateway is integrally strong – no need for dangerous steel reinforcing poles.

We’ve been working with county councils and highway contractors all over the UK to supply personalised entrance features for villages, communities and parish councils.
Glasdon Gateway

DESIGN FEATURES
- A low maintenance, long-lasting alternative to traditional wooden sign carriers.
- Hundreds of combinations of colour, slats, widths and heights available - contact us for more information.
- 600mm speed limit signs are available as a standard kit for the Glasdon Gateway. Signs include National Speed Limit, 30MPH, 40MPH and 50MPH.

SPECIFICATIONS
- Height: 1800mm (1300mm above ground) or 2300mm (1800mm above ground).
- Width: 960mm, 1500mm, 2000mm.
- Post Width: 160mm

MATERIAL OPTIONS
- Posts/slats: Everwood Material.
- Fixing bolts: Stainless steel.
Specify the colour:
Light Oak or Dark Oak for a wood effect, or white for maximum visibility.

Specify how many slats:
We can supply Glasdon Gateway with between one and four slats, with an optional crossbar for a traditional farm gate appearance.

Specify the width -
Standard options 960mm, 1500mm or 2000mm.

Choose a height:
Standard options are 1800mm (1300mm above ground) or 2300mm (1800mm above ground)

EXAMPLE SIGNAGE OPTIONS
Glasdon Gateway is supplied flat pack with comprehensive instructions for easy assembly. Attaching your existing signage to the product is a simple job, or we can supply a sign made to your specification. If you’re not sure about the dimensions of Gateway you need, we can recommend the right size based on the measurements of the sign you want to display - contact us for more information.
Pooling water can be dangerous to road users and the standing water can penetrate the road structure, causing severe damage, particularly on rural roads where there are generally fewer drains. In freezing conditions ice is created and expands creating cracks and pot holes in the road surface. Pot holes can create a major hazard and are very time consuming and costly to repair.

The Drainagemaster™ Drainage Grip is a lightweight, moulded highway drainage product that offers a more efficient solution to draining water from the road’s surface.
Drainagemaster™ Drainage Grip

DESIGN FEATURES
• Efficiently channels running and pooling water from rural road surfaces into a parallel drainage ditch.
• Robust side ridges allow vehicles to drive over the unit without damage.
• Quick and easy to install.
• Requires minimal maintenance - the wide, smooth surface discourages the build-up of debris and is easily cleared with a shovel or brush.
• Reflective patches are available so the unit can be easily located for maintenance checks.
• An extension channel is also available.
• For quantities over 5 please contact our sales office for the best prices.

SPECIFICATIONS
Width: 762mm  Depth: 900mm  Maximum height: 155mm

MATERIAL OPTIONS
Drainagemaster: Durapol® Material  Ground Pegs: Polypropylene.
With a choice of up to seven different fixing methods, there is sure to be one that is right for your application.

Our highways safety products are made from a range of high performance materials and undergo stringent checks to ensure durability and best value.

Glasdon has ISO9001:2015 and ISO4001:2015 accreditation, which underlines our commitment to quality.
LockFast™ Socket System

The LockFast™ Socket System is the first Glasdon socket compatible with passively safe Impactapol® material bollards. The square shape prevents twisting during an impact and is easy to pave around. Bollards are quick and easy to remove and replace, making them ideal for permanent, semi-permanent, or temporary applications. The socket will absorb the impact of most collisions, leaving the surrounding surfaces undamaged.

**SAFETY NOTICE:**

If the removal of a bollard creates a safety hazard, we strongly recommend the purchase of a socket blanking cap, which features a slip resistant finish.

- Moulded-in product code aids correct bollard top replacement.
- Square shape prevents twisting during a drive through and is easy to pave around.
- Moulded-in arrow and logo aids correct installation.
- Made from Durapol® polymer, a proven corrosion-resistant and impact-resistant material and fully recyclable after its long service life.
- Anchor points help to prevent uprooting.
- Flat base - much easier to level.

Galvanised mild steel blanking plate removes trip hazard and aids installation.

The first Glasdon socketed bollard proven passively safe to Performance Standard NE4/100.
**Standard Socket System**

Glasdon socketed bollards are quick and easy to remove and replace, making them ideal for permanent, semi-permanent, or temporary applications. The socket will absorb the impact of most collisions, leaving the surrounding surfaces undamaged.

**SAFETY NOTICE:**
If the removal of a bollard creates a safety hazard, we strongly recommend the purchase of a socket blanking cap, which features a slip resistant finish.

**Below-Ground Extended Base**

The extended base and horizontal ground fixing peg of the bollard are secured in concrete for permanent installation.

**Bolt-Down Fixing**

Bolt-down fixings allow a bollard to be installed in under 8 minutes on existing concrete sub-surfaces. This provides a permanent fixing point with a flush ground finish which eliminates trip hazards if the bollard is removed. Bolt-down fixing is ideal for use where a below-ground installation is restricted or impossible.

**Bolt-Down Fixings with Adjustable Depth Concrete-in Anchors**

For additional anchorage and to provide a permanent fixing point use bolt-down fixings with adjustable depth concrete in anchors. Adjustable depth concrete-in anchors can be used anywhere a fresh concrete sub-surface can be laid, creating a flush ground finish which eliminates trip hazards if the bollard is removed.

**Bolt-Down with Fixed Depth Concrete-in Anchors**

The two-piece fixed depth concrete-in anchors are suitable for a fresh concrete sub-surface, providing additional anchorage and a permanent fixing point. Available with Durapol® material and Impactapol® material bollards. For use in a minimum depth of 250mm.

**Guardsman™ Anti-Ram Raid Bollard Fixing**

A galvanised steel reinforcing tube extends 745mm below ground level, providing an integral root for superb strength and impact resistance. This tube is then filled with concrete. The bollard top is securely attached with hidden coupling bolts. Guardsman bollards are an excellent security feature and have been shown in tests to stop an unladen van dead at speeds of up to 30mph.
High Performance Materials

Glasdon bollards are manufactured from a range of high performance materials and undergo stringent checks to ensure durability and best value. Glasdon has ISO 9001:2015 and ISO 14001:2015 accreditation, underlining our commitment to quality.

**Durapol® Polymer**
A strong, lightweight material that offers a number of advantages over traditional materials. Durapol® material is self coloured, which means it will never need painting and scratches will not show. The material is totally corrosion-free so it will not chip or rust, and is vandal resistant.

**Passively Safe Impactapol® Polymer**
A flexible material with excellent recovery performance, meaning it will return to its original shape following a drive-through collision. Impactapol® material products reduce maintenance budgets in vulnerable locations by continuing to perform to statutory requirements even after repeated impacts. Impactapol® material offers all the additional benefits of Durapol® material – it is self-coloured and totally corrosion-free.

**Impactaflex™** material has been specially developed by Glasdon to provide new Chevroflex Ultra™ with superior rigidity and resilience, and offers exceptional recovery performance after a drive-through collision. *(Chevroflex Ultra see page 31-33)*

**Reflexapol™** polymer is specially engineered for long service life in exposed locations. It has good recovery properties and will never need painting. *(Vergemaster RX see page 36-37)*

**Ultraflex™** polymer is formulated to withstand harsh environments and has enhanced flexibility and extensibility properties offering good recovery performance after vehicular impact. *(Flexmaster see page 38)*

**Enviropol®** recycled plastic material is manufactured predominantly from post-consumer plastics. By balancing these uncontaminated recycled waste materials, the result is a remarkably versatile product with many applications and benefits. Enviropol material will not chip or rust, is easy to clean and never needs painting. *(Enviropol see page 30)*

**Buffer™ Bollard** is manufactured from 100% recycled rubber tyres and is pressure moulded to create a strong, hard-wearing, weatherproof material. *(Buffer see page 29)*

**Everwood™** material is a realistic timber grain polymer, which requires minimal maintenance. Everwood is vandal and weather resistant, will not rot, warp or crack. *(Glasdon Gateway and Glenwood see page 42-45)*
Our customers often approach us to help solve unique problems, and we are always happy to help. Have a look at some of our road safety products at work.
Photo Gallery
Visit our website to see our full range of Passively Safe products. Downloadable product literature, case studies and video clips are also available. Model specifications are available on all products in PDF, .DWG (Auto CAD) or .DXF formats.

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