



Highways Safety Solutions

www.glasdon.com

Highways Bollards	3-19
Sign Carrying Bollards	20-27
Recycled Material Bollards	28-30
Road Safety Signs	31-34
Road Safety Vergeposts	35-43
Gateway Sign Carriers	44-47
Other Road Safety Products	48-49
Fixing Options	50-52
High Performance Materials	53
Photo Gallery	54-59

Passively Safe

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.











Highways Bollards

Glasdon 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

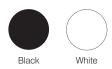
Socket depth below ground: 350mm

Extended base depth below ground: 300mm

*Rebound Impactapol model only.

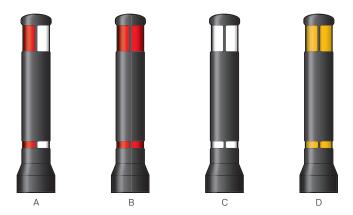






Bollard: Passively safe Impactapol® material or rigid Durapol material LockFast Socket: Durapol material.

Durapol material and Passively Safe Rebound Impactapol material: Black, White.



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#







Below Ground Extended Base

FIXING OPTIONS

Durapol material and Passively Safe Rebound Impactapol material: LockFast Socket, Below Ground Extended Base.



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



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.







Black

MATERIAL & COLOUR OPTIONS

Bollard: Passively safe Impactapol $^{\mbox{\tiny B}}$ material or rigid Durapol material.

LockFast Socket: Durapol material.

Durapol material and Passively Safe Rebound Impactapol material: Black.



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.







Below Ground Extended Base

FIXING OPTIONS

Durapol material and Passively Safe Rebound Impactapol material: LockFast Socket, Below Ground Extended Base.





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)
(bolt-down)
Maximum diameter:
Socket depth below ground:
Extended base depth below ground:

Extended base depth below ground:
Guardsman™ fixing depth below ground:
Bridgemaster™ fixing depth below ground:
Bolt-down fixing depth:

Adjustable depth concrete-in anchors maximum depth:



745mm

311mm

75mm

320mm



^{*}Rebound Impactapol model only.













White

Millstone

Sandstone

Dark Blue

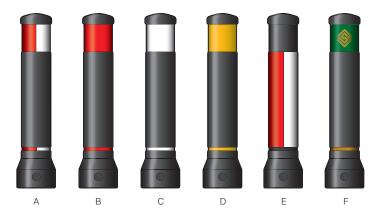
Stone

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. 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, Red, White or Amber body sleeve (3 x 150mm bands are available for use with Rebound model)#
- F. 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.





Durapol material: Standard Socket, Below Ground Extended Base, Bolt-Down fixing, Adjustable depth concrete-in anchors, Guardsman, Bridgemaster.

Passively Safe Rebound Impactapol material: Below Ground Extended Base, Bolt-Down fixing, Adjustable depth concrete-in anchors.

+Please note: Bridgemaster fixing is available in Black Durapol material only.





600mm High Neopolitan™ 150 Bollard

DESIGN FEATURES

- · Designed for improved visibility at junctions.
- Available as a self-righting Rebound bollard or a rigid Durapol® material model.
- · 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

320mm

Adjustable depth concrete-in anchors maximum depth:

 ${\bf *Rebound\ Impactapol\ model\ only}.$







Bollard: Passively safe Impactapol® material or rigid Durapol material Durapol material and Passively Safe Rebound Impactapol material: Black, White.

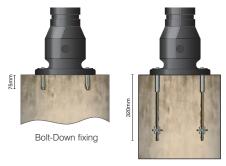


OPTIONAL BANDING

- 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.





Adjustable depth concrete-in anchors

FIXING OPTIONS

Durapol material and Passively Safe Rebound Impactapol material: Bolt-Down fixings, Adjustable depth concrete-in anchors.



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



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

925mm Height above ground: 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 95mm Bolt-down fixing depth: Adjustable depth concrete-in anchors maximum depth: 250mm





^{*}Rebound Impactapol model only.













Millstone

Sandstone

Dark Blue

Stone

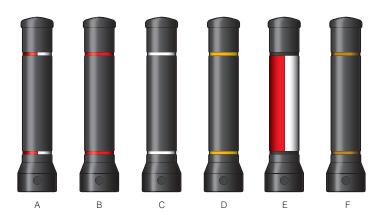
MATERIAL & COLOUR OPTIONS

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.)

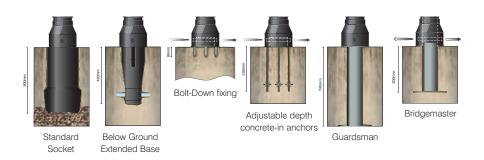


OPTIONAL BANDING

- 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, Red, White or Amber body sleeve (3 x 150mm bands are available for use with Rebound model)#
- F. 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, 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

936mm Height above ground: Maximum diameter: 198mm Socket depth below ground: 500mm Extended base Impactapol® model 300mm

depth below ground:

Extended base Durapol® model depth below ground: 430mm **PASSED** at 100 Km/h (62mph)





Ilton

Business

Parks

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.

^{*}Rebound Impactapol model only.







Millstone







Sandstone Aircraft Grey

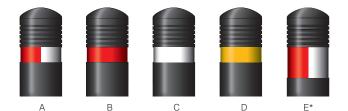
Stone

MATERIAL & COLOUR OPTIONS

Bollard: Passively safe Impactapol material or rigid Durapol material. Socket: Durapol material.

Durapol material: Black, White, Millstone, Sandstone, Aircraft Grey, 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. 1 x 80mm Red/White retroreflective band#

B. 1 x 80mm Red retroreflective band#

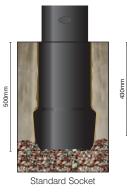
C. 1 x 80mm White retroreflective band#

D. 1 x 80mm Amber retroreflective band#

E. 1 x 150mm Red/White. Red. White or Amber 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.





Below Ground



Below Ground Extended Base

Extended Base Durapol Model

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.







Bollard: Passively safe Impactapol® material or rigid Durapol material.

Socket: Durapol material

Durapol material and Passively Safe Rebound Impactapol material: Black.





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.



420mm

Standard Socket

Below Ground Extended Base

FIXING OPTIONS

Durapol material: Standard Socket, Below Ground Extended Base.

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.





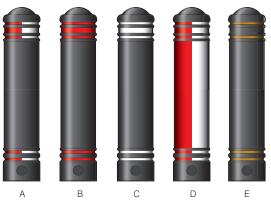


Bollard: Passively safe Impactapol® material or rigid Durapol material.

Socket: Durapol material

Durapol material and Passively Safe Rebound Impactapol material: Black.

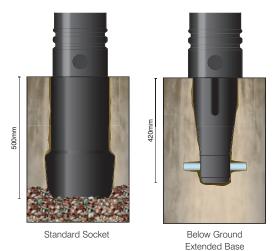




OPTIONAL BANDING

- 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, Red, White or Amber body sleeve, 4 x 12mm and 1 x 27mm retroreflective bands*
- E. 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

Durapol material: Standard Socket, Below Ground Extended Base.

Passively Safe Rebound Impactapol material: Below Ground Extended Base.



Sign Carrying Bollards

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.

SPECIFICATIONS

maximum depth:

Height above ground: 1196mm
Width: 370mm
Sign face dimensions: 308mm x 248mm

Bolt-down fixing depth: 75mm
Adjustable depth concrete-in anchors

320mm





Black

Millstone

MATERIAL & COLOUR OPTIONS

Durapol material in Black, Millstone.



Adjustable depth concrete-in anchors

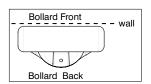
FIXING OPTIONS

Bolt-Down fixing, Adjustable depth concrete-in anchors.



OPTIONAL SIGNFACES

Available single or double sided and with optional side reflectors. Infomaster can be used for a range of applications, please see above for examples. Disabled Badge Holder signface available as a standard sign price option. Other non-standard signfaces are available, to discuss your requirements please telephone our sales office on 01253 600411.



SIGNFACE ORIENTATION

If Infomaster 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.
- Optional socket blanking cap available.

SPECIFICATIONS

C. Loui lovillono	
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
Bolt-down fixing depth:	75mm
Adjustable depth concrete-in anchors maximum depth:	320mm



Bollard: Rigid Durapol material.

Socket: Durapol material.

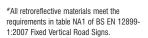
Durapol material: Black, White, Millstone, Dark Blue*, Aircraft Grey. (Some colours are subject to a minimum order quantity. Please telephone our Sales Office for details.)

*Dark Blue colour option only available with the Standard Socket or Below Ground Extended Base fixings



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, Red, White or Amber body sleeve
- F. 2 x 20mm Gold decorative bands





Ensign Bollard also takes two 210mm x 125mm signs.



Ensign Bollard also takes two Ø150mm signs.























9 Ref 956

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 or Right
- 7. Keep Left or Right
- 8. Cycle Route
- 9. Cycle/Pedestrians Only
- 10. Cycle/Pedestrians Only "Route Marked"
- 11. Cycle/Pedestrians Only "Route Marked" reversed



Standard Socket



Below Ground Extended Base





FIXING OPTIONS

Durapol material: Standard Socket, Below Ground Extended Base, Bolt-Down fixing, Adjustable depth concrete-in anchors.





10 Ref 957 11 Ref 957 Reversed



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.
- · Optional socket blanking cap available.

SPECIFICATIONS

Height above ground:	
(socketed)	1010mm
(bolt-down)	1087mm
Maximum diameter:	200mm
Sign face diameter:	150mm
Socket depth below ground:	500mm
Extended base depth below ground:	420mm
Bolt-down fixing depth:	75mm
Adjustable depth concrete-in anchors maximum depth:	320mm
Sublite fixing minimum depth below-ground:	226mm

^{*}Rebound Impactapol model only.







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

Durapol material: Black, White, Millstone, Sandstone, Dark Blue, Aircraft Grey, Stone. 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, Red, White or Amber body sleeve(3 x 150mm bands are available for use with Mini Ensign Rebound models.)#
- F. 2 x 20mm Gold decorative bands
- G. 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.



MINI ENSIGN ILLUMINATED **BOLLARD**

White Mini Ensign illuminated rebound bollard with Red/White translucent retroreflective bands











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.



Standard Socket



Below Ground Extended Base



fixing



Adjustable depth concrete-in anchors



Sublite fixing for Mini Ensign illuminated rebound bollard

FIXING OPTIONS

Durapol material: Standard Socket, Below Ground Extended Base, Bolt-Down fixing, Adjustable depth concrete-in anchors. Passively Safe Rebound Impactapol material: Below Ground Extended Base, Bolt-Down fixing, Adjustable depth concrete-in anchors, Sublite fixing for Mini Ensign illuminated rebound bollard.

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



Cyclemaster™ Bollard

DESIGN FEATURES

- Available as a self-righting Rebound bollard or rigid Durapol® material model.
- Wide range of 150mm or 125 x 210mm vandal-resistant signface options.
- Can display up to 6 signfaces on front and rear (3 per side).
- Fluorescent yellow retroreflective panels provide high visibility by day and by night.
- · Recessed areas for retroreflective panels.
- · Optional side reflectors angled for increased visibility.
- · Socket fixing allows quick and easy bollard top replacement.

SPECIFICATIONS

Height above ground:

Socket depth below ground: Extended base depth below ground: Bolt-down fixing depth:

Adjustable depth concrete-in anchors maximum depth:

Fixed depth concrete-in anchors maximum depth:

1000mm 216mm 306mm 256mm 75mm

320mm

250mm





Bollard: Rebound Impactapol® material or rigid Durapol material. Socket: Durapol material.

Durapol material and Rebound Impactapol material: Black, White.



OPTION 1 REFLECTORS

- 1 x Fluorescent Yellow retroreflective front panel
- 2 x Fluorescent Yellow retroreflective side panels



OPTION 2 REFLECTORS

- 1 x Fluorescent Yellow retroreflective front panel
- 4 x Fluorescent Yellow retroreflective side panels



OPTION 3 REFLECTORS

- 1 x Fluorescent Yellow retroreflective front panel
- 1 x Fluorescent Yellow retroreflective back panel
- 4 x Fluorescent Yellow retroreflective side panels



RETROREFLECTIVE PATCH OPTIONS

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





Extended Base





fixing





anchors









3 Ref 957





& 6106R





& 606R







Straight Ahead

8 Ref 2602.2

FIXING OPTIONS

Socket

Durapol material and Impactapol material: Socket, Below Ground Extended Base, Boltdown fixing, Adjustable depth concrete-in anchors, Fixed depth concrete-in anchors.

STANDARD PRICE SIGN OPTIONS

Cyclemaster bollard has the option to carry up to 3 signs on each side.

- 1. Cycle Route
- 2. Cycle/Pedestrians Only
- 3. Cycle/Pedestrians Only "Route Marked"
- 4. Cycle/Pedestrians Only "Route Marked" reversed
- 5. Keep Left or Right
- 6. Turn Left or Right
- 7. Straight Ahead
- 8. Numbered Cycle Route

Other non-standard signfaces are available, please contact our sales office for information.

Recycled Material Bollards

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 248mm Maximum diameter: Extended base depth below ground: 300mm Bolt-down fixing depth: 95mm Adjustable depth concrete-in anchors: 250mm





Black

Green

MATERIAL & COLOUR OPTIONS

Bollard: 100% recycled rubber car tyres in Black, Green.

Reinforcing tube: Galvanised mild steel.



Bolt-Down fixing



Adjustable depth concrete-in anchors



Below Ground Extended Base

FIXING OPTIONS

Bolt-Down fixing, 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.





Enviropol® Bollard

DESIGN FEATURES

- · Available with a flat or round top.
- · Recessed area for retroreflective or decorative banding.
- Made from 100% recycled material.
- · Below-ground extended base fixing.

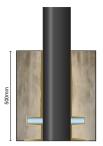
SPECIFICATIONS

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



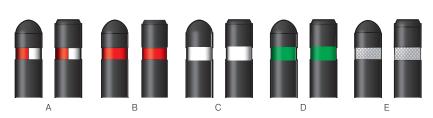
MATERIAL & COLOUR OPTIONS

Bollard: 100% recycled Enviropol® material in Black.



Below Ground Extended Base

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 Green decorative bandE.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 classleading 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

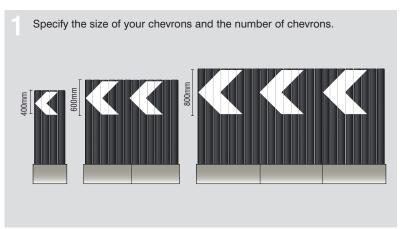
Uprights: Impactaflex™ material Socket: Galvanised steel

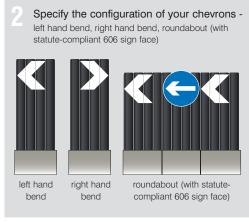
Uprights: Black.

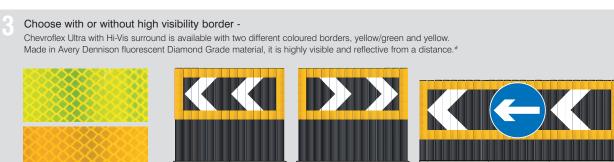
Hi-Vis surround: Yellow or Yellow/Green



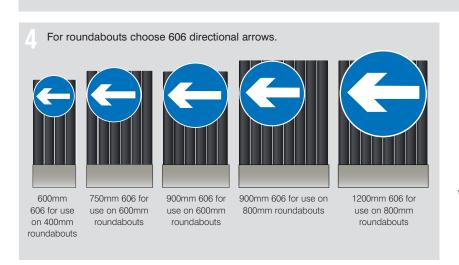


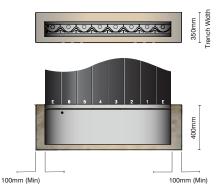






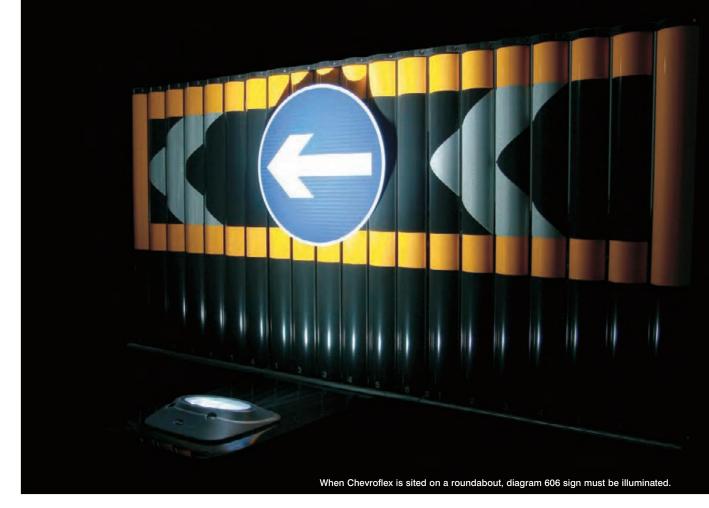
#All retroreflective materials supplied by Glasdon UK are as recommended in table NA1 of the National Annex of BS EN 12899-1:2007 Fixed Vertical Road Signs.





FIXING

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





Road Safety Vergeposts

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™ material reflectors increase reflective performance and viewing angles for clear delineation by day and night.

SPECIFICATIONS

Height above ground: (extended base/stake type) 920mm (bolt-down). 886mm 167mm Maximum diameter: Extended base depth below ground: 350mm Stake type depth below ground: 523mm 100mm Bolt-down depth below ground: Adjustable depth concrete-in anchors depth below ground: 320mm

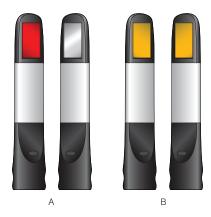
*Below Ground Extended Base model only.





MATERIAL OPTIONS

Marker post: Reflexapol™ material Fixing stake: Pressure-treated timber



VERGEMASTER REFLECTOR OPTIONS

A. Red & White

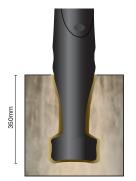
B. Amber & Amber

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

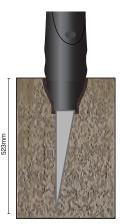


MOULDED-IN WHITE BAND SECTION OF MATERIAL

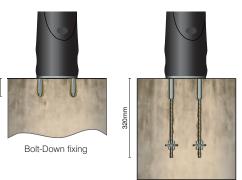
Integral white bands fused to the post with heat and compression.



Below Ground Extended Base



Below Ground Stake Type



Adjustable depth concrete-in anchors



Below Ground Extended Base, Below Ground Stake Type, Bolt-Down fixing, 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

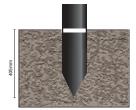
Height above ground: 905mm
Height above ground layby variant: 600mm,
500mm or 480mm
Width: 150mm

Standard fixing depth below ground: 405mm Advanced fixing depth below ground: 400mm

MATERIAL OPTIONS

Marker post: Ultraflex™ material.

Advanced socket fixing: Galvanised steel.



Standard Fixing Option



Advanced Fixing Option (socketed)

Red & White

Amber & Amber

FLEXMASTER REFLECTOR OPTIONS

#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

FIXING OPTIONS

Standard Fixing Option
Advanced Fixing Option (socketed)







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.

SPECIFICATIONS

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

MATERIAL OPTIONS

Marker post: Impactapol material







Below Ground Extended Base

FIXING OPTIONS

Below Ground Extended Base.



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.

SPECIFICATIONS

Height above ground: 510mm Maximum diameter: 140mm Depth below ground: 276mm

MATERIAL AND COLOUR OPTIONS

Rigid Bollard: Durapol material in Black, White, Millstone, Sandstone,

Rebound Bollard: Impactapol® material in Black.













Sandstone

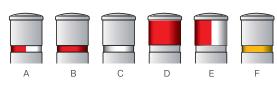
Granite



Below Ground Extended Base

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 or White retroreflective band.#
- E. 1 x 98mm Rebound Red/White HIP 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.









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.

SPECIFICATIONS

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



Post: Durapol® material in White.





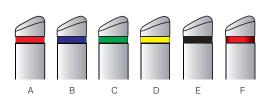
Below Ground
Extended Base with
optional ground
fixing peg



Below Ground Extended Base without ground fixing peg

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

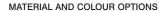
- Manufactured from Everwood[™] material, which has a unique realistic timber grain effect.
- · Lightweight and easy to install.
- Moulded-in saw grooves enable the post to be easily cut down to the desired height. Height options are 1000mm, 830mm and 500mm.
- · Recessed area for retroreflective banding.
- 100mm vandal-resistant signfaces.

SPECIFICATIONS

Height above ground: 500mm, 830mm or

1000mm Width: 150mm

Depth below ground: 450mm to 650mm



Post: Everwood material in White, Light Oak, Dark Oak.







Light Oak

Dark Oak



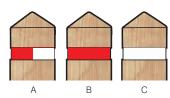
Below Ground Extended Base



Below Ground with Fixing Peg

FIXING OPTIONS

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



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 STANDARD SIGNFACES*

*Other non-standard signfaces are available, please contact our sales office for information.









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.

SPECIFICATIONS

Height above ground (Glenwood 170 Post):

(Glenwood 170 Signhead Post):

Width: 170mm

Socketed depth below ground:

Extended base depth below ground: 315mm

MATERIAL AND COLOUR OPTIONS

Post: Everwood material in Light Oak, Dark Oak. Glenwood socket: Durapol® material.





Light Oak

Dark Oak

Glenwood Socket

Below Ground Extended Base

FIXING OPTIONS

Glenwood Socket Below Ground Extended Base





С

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.



1000mm

1093mm

355mm











Rectangular



Circular



Ref 2602.2

OPTIONAL STANDARD SIGNFACES*

*Other non-standard signfaces are available, please contact our sales office for information.



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 designs with various colours, 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).

Ornate model height: 2300mm

Width: 960mm, 1500mm, 2000mm.

Ornate model width: 1690mm Post Width: 160mm

MATERIAL AND COLOUR OPTIONS

Posts/slats: Everwood™ Material in White, Light Oak, Dark Oak.

Fixing bolts: Stainless steel.

Sufave mount bracket: 5mm Galvanised mild steel.





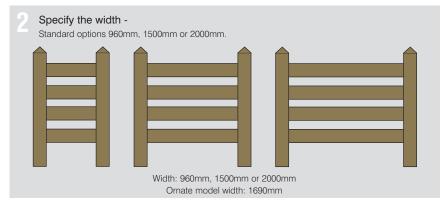


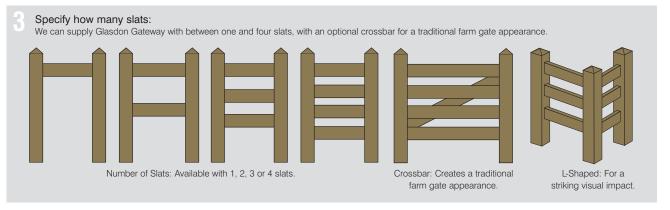












Choose a height: Standard options are 1800mm (1300mm above ground) or 2300mm (1800mm above ground)
Ornate model height: 2300mm

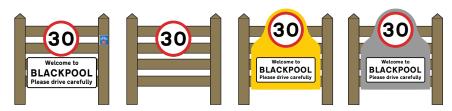


Below Ground Extended Base

Surface Mount Kit

FIXING OPTIONS

Below Ground Extended Base Surface Mount Kit



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.

Other Road Safety Products

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.



Fixing Options & Materials

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® material, a proven corrosionresistant 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.













NEW Glenwood™ Socket System also available for the

Glenwood™ 170 Post & Glenwood™ 170 Signhead Post.

Temporary Blanking Cap

auicker

installation.

Locking Blanking Cap

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.



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.



Adjustable Depth Concrete-in Anchors

For additional achorage 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.



Bridgemaster™ Fixing

Ideal for bridges, this fixing can be used where there is an insufficient depth for a socketed bollard, or when there is not a suitable concrete surface/area to bolddown.

A galvanised steel reinforcing tube extends 300mm below ground level, providing an integral root for superb strength and anchorage.



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® Material

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® Material

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 ercycled 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 42-47)

Photo Gallery

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.































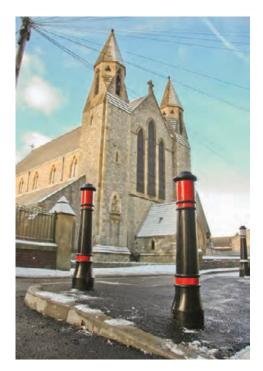








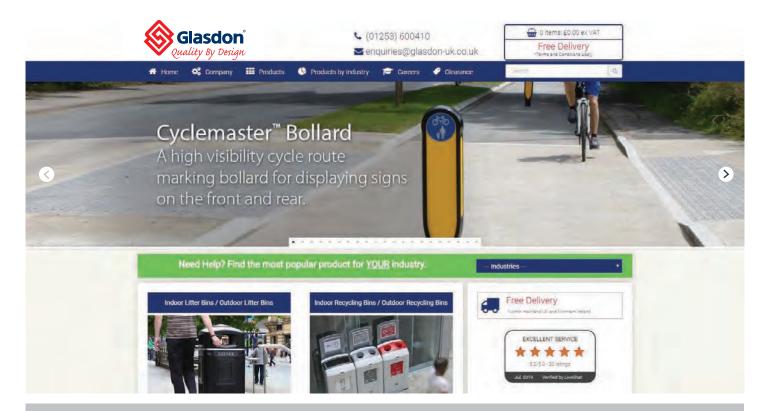
www.glasdon.com











www.glasdon.com

clips are also available.

Model specifications are available on all products in PDF, .DWG (Auto CAD) or .DXF formats.

Sciasdon', Admiral, Advanced Neopolitan, Bridgemaster, Buffer, Chevroflex Ultra, Cyclemaster, Drainagemaster, Durapol, Edgeliner, Edgemaster, Ensign, Enviropol, Everwood, Flexmaster, Glasdon Manchester, Glenwood, Guardsman, Hazardmaster, Impactaflex, Impactalight, Impactapol, Infomaster, Jubilee, LockFast, Mini Ensign, Neopolitan, Reflexapol, Sublite Lumino, Ultraflex, Vergemaster RX and Victory are trademarks or registered trademarks of GLASDON Group or its subsidiaries in the UK and other countries.















Local Government Highways Division Preston New Road BLACKPOOL Lancashire FY4 4UL

(01253) 600411 Fax: (01253) 792558 E-mail: hs@glasdon-uk.co.uk Web: www.glasdon.com











