



EVERYTHING
YOU NEED
TO CREATE
**A SAFER
OUTDOORS**

LANDSCAPE **PROTECTION**



Marshalls

Creating Better Spaces

Marshalls Landscape Protection

Protective Street Furniture is not traditionally viewed as products that enhance landscapes, more as a necessary evil to ensure our people, places and infrastructure are kept safe from threat.

In most cases, protective products are developed with minimal consideration given to their design.

Marshalls Landscape Protection has flipped this on its head. A design, engineering and specification philosophy enables highly effective protection to blend seamlessly into urban landscape design. Allowing architects, planners and designers to install the levels of security required without instilling fear.

The Marshalls Landscape Protection product portfolio includes a wide range of products that defend, deter or deflect. Whether an area needs to be protected with crash rated furniture that can withstand a 7.5 tonne truck travelling at 50mph, or if a busy high street needs protecting from slower moving errant vehicles or whether a visual deterrent is required to keep an area secure there is a product type to suit all requirements.

Our specialist design and engineering teams are experienced in a range of materials from natural stone and concrete to aluminium, stainless steel and timber. So if you don't find what you need within the Marshalls Landscape Furniture range, your options don't end there. Our exceptional bespoke products often start with a flash of inspiration that is then fully explored and carefully nurtured throughout your project.

Speak to our team on 0370 600 2425 about how we can help create your project vision.





Legislations Explained

Performance and Application

At the heart of Hostile Vehicle Mitigation is the BSI Publicly Available Standards (PAS) such as PAS 68 and IWA 14.1. Each standard enables the specification of assured protection against hostile vehicles.

PAS 68






The Publicly Available Specification, PAS 68, specifies a performance classification for vehicle security barriers and their foundations when subjected to a horizontal impact.

The standard was devised and administered by the Centre for the Protection of National Infrastructure (CPNI), and tests security barriers at varying speeds, using different size vehicles. Whilst it is only through specifying products successfully tested in accordance with PAS 68 that protective security can truly be assured, this does not necessarily mean that the highest specifications of PAS 68 protection are always required.

PAS 69

BSI PAS 68 is complemented by the PAS 69 document, which provides guidance on the selection, installation, foundations and use of PAS 68 tested security products, taking into account site specific conditions, to ensure they are placed as effectively as possible.

PAS 69 suggests a maximum gap of 1.2m between the installed, upright faces of successive security products, to ensure that vehicles are prevented from encroaching freely between the barriers.

Vehicle Speed km/h (mph)	Vehicle Mass (kg)				
	 1.5 tonne Saloon Car (M1)	 2.5 tonne 4x4 Pickup (N1G)	 3.5 tonne Flatbed Van (N1)	 Empty 18 tonne 2 Axle Lorry (Weights 7.5 tonnes - N3)	 30 tonne 4 Axle Lorry (N3)
16 (10)	15kJ	25kJ	35kJ	74kJ	296kJ
32 (20)	59kJ	99kJ	138kJ	296kJ	1185kJ
48 (30)	133kJ	222kJ	311kJ	667kJ	2667kJ
64 (40)	237kJ	395kJ	553kJ	1185kJ	4741kJ
80 (50)	370kJ	617kJ	864kJ	1852kJ	7407kJ
96 (60)	533kJ	889kJ	1244kJ		
112 (70)	726kJ	1210kJ			

The table above provides the kinetic energy values (in kJ) created on impact, for each of the vehicle types and speeds used in PAS 68 CWA 16221 impact testing.

IWA 14.1

IWA 14.1 is an international standard for counter terrorism impact testing agreements which incorporates PAS 68, ASTM 2656, and the CEN Workshop Agreement.

Hence, no matter where you are based or where you want to create a safe and beautiful space, the IWA workshop agreement standardises all counter terrorism impact testing agreements and models and combines them into one, making the testing and specification of products easier and clearer for all specifiers.

IWA 14.2

IWA 14.2 provide guidance for the selection, installation and use of vehicle security barriers (VSBs) and describes the process of producing operational requirements (ORs).

IWA 14.2 also gives guidance on a design method for assessing the performance of a VSB.

PAS 170

PAS170 delivers a testing standard for vehicles of up to 2.5 tonnes travelling at 10 or 20mph. Lower than the regulations developed to mitigate against vehicle born terror attacks.

Unlike previous anti-ram solutions, new products tested and certified by PAS170 provides businesses and local authorities with assurance and proof of performance for the first time.

Our RhinoGuard™ range of bollards have a wide range of sleeve options, various fixing types and foundation depths available to suit your scheme. All our cores have been tested from 1.5tonne to 7.5tonne at various speeds up to 50mph.

STEEL

STAINLESS STEEL

GEO STAINLESS STEEL

LED MARKER

DECORATIVE SLEEVES

If you require a protective solution in the form of Landscape Furniture, our RhinoGuard™ core can also be fitted with an attractive shroud in the form of a litter bin or cycle stand from our popular Geo Collection.

GEO LITTER BIN

GEO CYCLE STAND

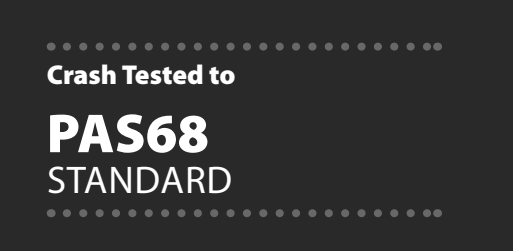
Stainless Steel / Brushed Satin

Decorative Sleeves

Sleeve Options Available:



Finishes:



DIAMOND FADE - MODERN • MODERN 2 • ORGANIC • STAINLESS



DUBAI - MODERN • MODERN 2 • ORGANIC • STAINLESS



FLOWER BURST - MODERN • MODERN 2 • ORGANIC • STAINLESS



Protective Measures

Marshall's Landscape Protection products are available in a wide range of materials, styles, price points and finishes. Ensuring suitability for a variety of applications.

Crash Tested to

PAS68
STANDARD

SURFACE MOUNT

Redi-rock



Redi-Rock hostile vehicle mitigation walling is proven to stop a 7.5 tonne truck at 30mph. No ground anchors required, fast to install and free standing.

AUTOMATED BOLLARD

LED



Marshall's Landscape Protection automated bollards provide an aesthetically pleasing access control point. Automated bollards offer a wide range of flexibility to suit a multitude of site access needs and requirements.

POST & RAIL

Waterside



We have a wealth of experience in specialist post & rail systems. Available in a wide range of materials and styles, our specialists can work with you to create the perfect configuration for your scheme.

AUTOMATED GATES



Automatic gates are an essential component of a security and access control system where vehicular and pedestrian access needs to be controlled. Automated gates offer security, all weather operation and are widely recognised as a deterrent product for residential and commercial use.

AUTOMATED BLOCKERS



Automatic Blockers act as a great deterrent due to their size and visibility. They are very effective at closing down lanes and limiting pedestrian access. Blockers can easily incorporate light and signs on the front helping inform and deter unwanted vehicles.



Protective Street Furniture

We believe that keeping people safe does not have to compromise the aesthetics of surrounding areas. Marshalls Landscape Protection offers a number of aesthetically pleasing, crash tested furniture solutions that can blend seamlessly into all environments. Ensuring people feel safe not scared.

Crash Tested to

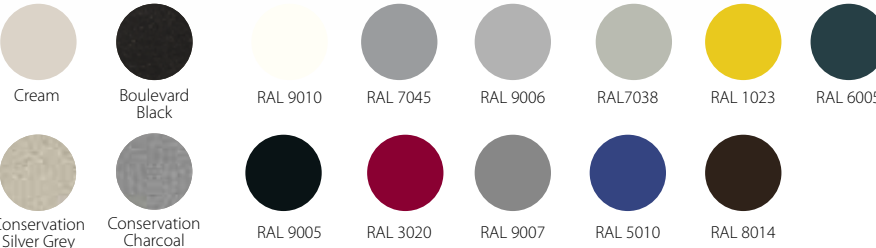
PAS68
STANDARD

Igneo 75/40 Seat

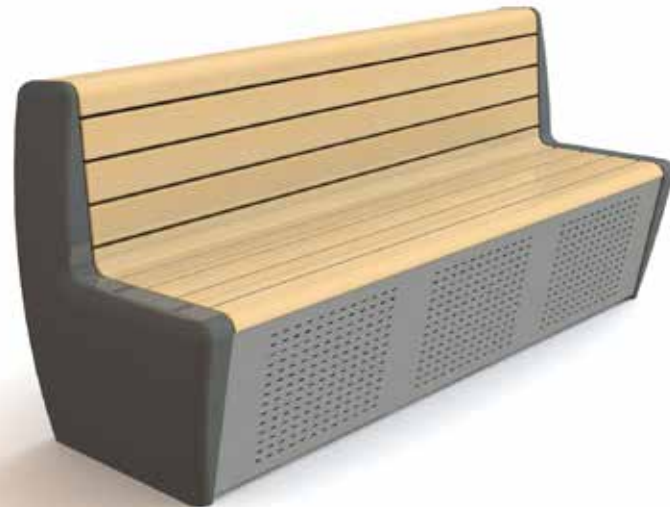


MATERIALS/COLOURS

Precast Concrete Armrest Powder Coat Colours

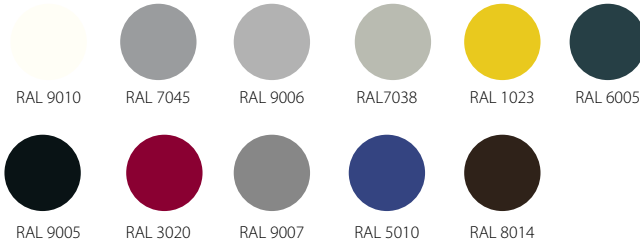


EOS 75/30 Protective Seat



MATERIALS/COLOURS

Ferrocass



RhinoGuard™ Blok



RhinoGuard Blok Silver Grey
With timber cladding



RhinoGuard Blok Silver Grey

RhinoGuard Blok Mid Grey

RhinoGuard Blok Mid Grey
With timber cladding

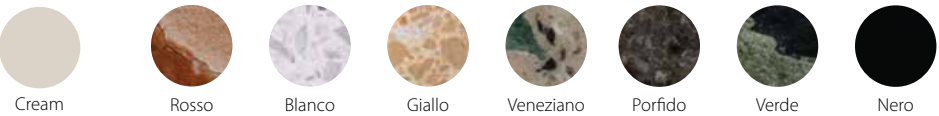
Giove Protective Planter

Our 75/50 rated RhinoGuard™ Giove Planter has a range of Stone options available depending on your design requirements.



MATERIALS/COLOURS

Concrete Precious Stone



Protective Bollards

Perimeter Protection

Marshalls Landscape Protection bollards are available in a wide range of materials, styles, price points and finishes. Ensuring suitability for a variety of applications.

Material Types Available:

STAINLESS STEEL RS001



Stainless steel bollards provide a classic yet contemporary solution to perimeter protection. Our bollards are manufactured using the highest grade stainless steel which increases resistance to corrosion and makes it less susceptible to surface pitting.

STEEL RB101



Steel bollards provide strong, simple and cost effective security measures ideal for access control, ram raiding deterrence and creation of pedestrian walkways. Each steel bollard has a number of options to enable you to customise products to suit your scheme.

FERROCAST Manchester



Ferrocast bollards are an ideal way to increase security around your perimeter. Suitable for use in almost any situation and available in a number of styles to coordinate with most landscapes, whether traditional or contemporary.

CONCRETE Bridgford



Our comprehensive range of concrete bollards contain numerous designs and finishes, encompassing the purely utilitarian and those with contemporary styling, providing choice for a range of different environments.

CAST IRON Imperial MSF



Marshalls cast iron bollards are manufactured from ductile iron, this material is ideal for bollard use as it retains its maintainability and corrosion resistance but has additional strength and toughness. Some of our cast iron bollards can be personalised with crests, logos and coats of arms upon request.



Other material and style options available.
Please visit [Marshalls.co.uk](https://www.marshalls.co.uk) or call 0370 600 2425

*Images for reference only. Some styles are not available as PAS rated.

Protective Bollards

Perimeter Protection

Marshalls Landscape Protection bollards are available in a wide range of materials, styles, price points and finishes. Ensuring suitability for a variety of applications.

Material Types Available:



Marshalls Landscape Protection range of timber bollards are manufactured from Opepe timber, a hardwood that is often used for heavy structural work. These bollards will allow you to bring natural materials in to an urban environment.



Steel bollards provide security to any landscape. Manufactured to the highest standard, Marshalls Landscape Protection powder coated steel bollards are extremely durable due to their galvanised and powder coated finish making them ideal for use in street furniture applications.



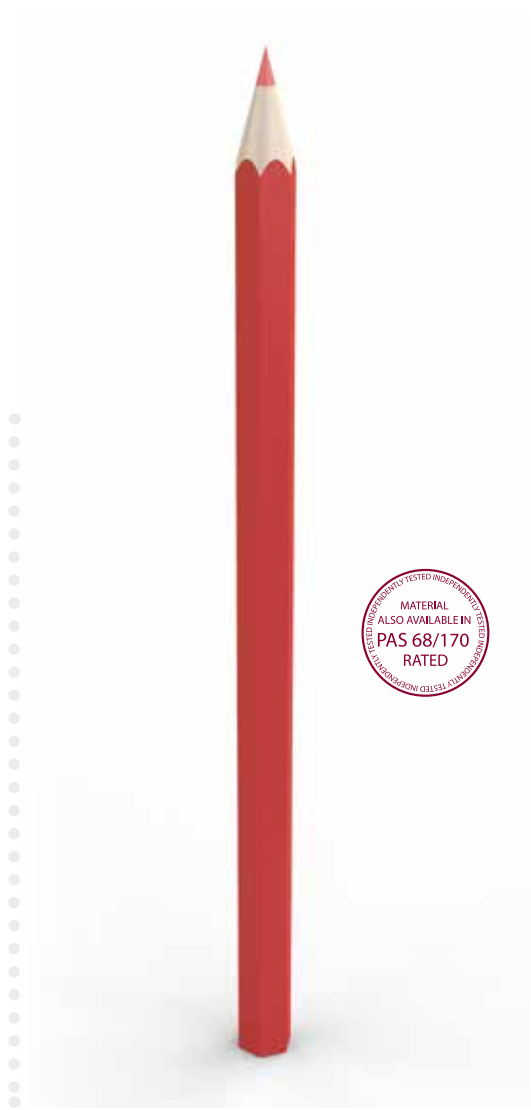
Marshalls' range of plastic bollards are an ideal solution for use in multiple locations. Plastic bollards are low maintenance, durable and long lasting.



Natural stone bollards are a range of functional and flexible pieces which all create clean and simple solutions for any urban space. The range uses highest quality granite, which is strong, durable and enduring.



Ferrocass can be shaped into almost any style, due to the simple moulding process and its low cost tooling this material gives you design freedom to create anything required for a project.



Other material and style options available.
Please visit Marshalls.co.uk or call 0370 600 2425

Visual Deterrent Measures

Marshalls Landscape Protection products offer the perfect solution for a large range of environments where a deterrent solution is required. The product range offers a number of flexible solutions that are suitable for a wide range of applications.

TELESCOPIC BOLLARD



ALSO AVAILABLE AS
PAS 68
RATED

The Rhino Telescopic bollards provide a secure, simple and cost effective method of protective premises and vehicles for domestic and commercial application.

AUTOMATED GATES



ALSO AVAILABLE AS
PAS 68
RATED

Automatic gates are an essential component of a security and access control system where vehicular and pedestrian access need to be controlled. Automated gates offer security, all weather operation and are widely recognised as a deterrent product for residential and commercial use.

AUTOMATED BOLLARD



ALSO AVAILABLE AS
PAS 68
RATED

Marshalls Landscape Protection automated bollards provide an aesthetically pleasing access control point. Automated bollards offer a wide range of flexibility to suit a multitude of site access needs and requirements.

POST & RAIL



ALSO AVAILABLE AS
PAS 68
RATED

We have a wealth of experience in specialist post & rail systems. Available in a wide range of materials and styles, our specialists can work with you to create the perfect configuration for your scheme.

IGNEO SEAT



ALSO AVAILABLE AS
PAS 68
RATED

MATERIALS/COLOURS

Precast Concrete



Cream



Boulevard Black

Armrest Powder Coat Colours



RAL 9010



RAL 7045



RAL 9006



RAL 7038



RAL 1023



RAL 6005



Conservation Silver Grey



Conservation Charcoal



RAL 9005



RAL 3020



RAL 9007



RAL 5010



RAL 8014

RHINOBLOCK



ALSO AVAILABLE AS
PAS 68
RATED

GIOVE PLANTERS



ALSO AVAILABLE AS
PAS 68
RATED

MATERIALS/COLOURS

Concrete



Cream

Precious Stone



Rosso



Blanco



Giallo



Veneziano



Porfido



Verde



Nero

Planters

Marshalls Landscape Protection products offer the perfect solution for a large range of environments where a deterrent solution is required. The product range offers a number of flexible solutions that are suitable for a wide range of applications.

DEMETRA



The Demetra planter is available in concrete or precious stone. Due to its self-levelling system the Demetra products are perfectly level on slopes with up to a 6% incline.

ACQUARIO



The Bellitalia Acquario Precious Stone Planter is rectangular in shape and features gently rounded corners.

Manufactured from reinforced precious stone concrete, the walls of the planter are at least 70mm thick with a base of 500mm.

CLASSICA



The Bellitalia Classica Circular Planter is a self-levelling planter available in two sizes – the 300-litre Classica 1220 and the 600-litre Classica 1620. Classica planters are manufactured from precious stone concrete, sandblasted and finished with a transparent anti-decay coating.

BOULEVARD



The Boulevard Circular Concrete Planter is designed to offer a robust and practical planting solution for your landscape project. Manufactured in concrete for ultimate durability, the Boulevard Circular Concrete Planter is available in a range of standard colours.

STRADA



Offering clean lines and simplicity, the Strada Circular Concrete Planter will enhance any urban landscape. Made from precast concrete, the planter's durability allows it to be strategically placed to restrict vehicular access and guide pedestrian flow, offering an important functional addition to a scheme.





Lets create greater outdoors

Our integrated street furniture ranges have everything you need to create spaces that people flock to. Places they can meet up, unwind and relax.

Whilst our main objective is to ensure our products provide the required levels of security to sites at potential risk, we believe that it is also vital that landscapes remain functional, attractive and appreciated by the community that use them.

Whatever you're looking for, whether it's a specific product or a certain theme, you'll find everything you need to create greater outdoors.




Marshall's
Creating Better Spaces

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