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Cycling Landscapes

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Please Note

The evolution of new product design is continuous and information is subject to change without notice. Customers should check with the supplier to ensure if they have the latest details.

Products are best seen in action and wherever practical images are of actual installations.

Marshalls is committed to providing a customer orientated service and would welcome feedback on our products and services. For further information on maintenance, application, efflorescence or conditions of sale please visit our website: www.marshalls.co.uk/commercial

Creating 21st Century Cycling Infrastructure



Niels Hoe is CEO of HOE360 Consulting.

Niels has worked in cycling, green mobility and urban planning for more than 10 years, with a strong focus on how those facets are combined in order to create high quality cities with great liveability.

The backbone of the consultancy is extensive experience and knowledge of cycling, mobility and public transport, with a strong understanding of cycling and pedestrian culture, urban life and design.

Niels' works is conducted both in Denmark and Internationally on a wide range of projects - all with cycling as a recognisable thread - where Niels has worked on several notable bicycle related concept and design developments.

HOE360 Consulting is a member of the Danish Cycling Embassy and Niels is a certified QUEST Auditor.

Cycling is back on the agenda. Having once been a main mode of transport, cycling began to struggle post WW2 as private car use gained ground. But nowadays cycling enjoys growing attention globally, although initiatives vary from country to country and city to city. While it is broadly acknowledged that the Netherlands and Denmark are the leading cycling nations, other countries throughout Europe and further afield are moving forward, among them the UK. Albeit at different paces!

In many upcoming cycling countries there is currently a great deal of discussion on what is right and what's not when it comes to planning and detail design. Safety plays a major role in those discussions, and rightly so, but debating safety issues must not become an excuse that prevents cities from doing anything.

It's vital to take cycling initiatives from the meeting rooms and onto the streets, and in that process, accept that Rome wasn't built in one day. When mistakes are made, try again.

What the leading International cycling cities have in common today is the result of many decades of hard work and targeted funding – and mistakes.

In order to make cities great, the decision-makers must realize that planning for people is key – not planning for traffic. Great cities give their citizens room for interaction and nobody interacts by driving from A to B at speed.

On the other hand, cycling - and pedestrian - infrastructure provides a perfect ground for this. It makes people meet at eye level.

Cycling is for everyone, no matter their age, sex or desired sped of travel – as long as it is supported correctly .

Returning to safety and the conception of safety... One element is actual safety, another aspect entirely is the perception of safety. Places that are considered safe from a planning point of view may be seen as unsafe by the users, and anyone who finds the design uncomfortable most likely won't ride there.

Here, speed limits for motorised traffic play a significant part. As a rule of thumb, the higher the vehicular speed, the more segregation is required between the different transport modes. Designs might range from shared space to full segregation with kerbs between the motorised traffic and pedal driven and again between cycle routes and pedestrian footpaths.

When considering a city and deciding where to place bicycle infrastructure, connectivity is of the utmost importance. Without this the chances of success are limited since a fragmented system is not what cyclists want from their town or city.

Remember also that every cycling trip begins and ends with a parked bicycle. Therefore bicycle parking should be an integrated element of all cycling initiatives: it's not enough to simply plan and build a cyclepath network, there must also be sufficient numbers of well-placed bicycle racks. Imagine a city that manages to double its bicycle usage but forgets the parking aspect!

Small things matter – so don't forget to pamper cyclists! By doing this a city shows that it cares. Small interventions such as ramps for easy access, pre-green signals to give cyclists a head start, bike boxes at junctions so cyclists are placed in a safer position in front of vehicles, bicycle-counters, repair stands, air pumps etc don't cost much but are hugely appreciated by the users.

Cycling is good business. Its infrastructure is remarkably cheap compared to infrastructure that caters for cars and public transport. It is also often competitive with regard to travel times, especially in major cities, which makes it a highly attractive mode of transport. It boosts local commerce, encouraging people to spend more time on the street and around retail areas. On top of that, cycling is a huge contributor to public health, providing the public with physical activity and thereby saving funds from public health budgets.

So... Build it and they will come!

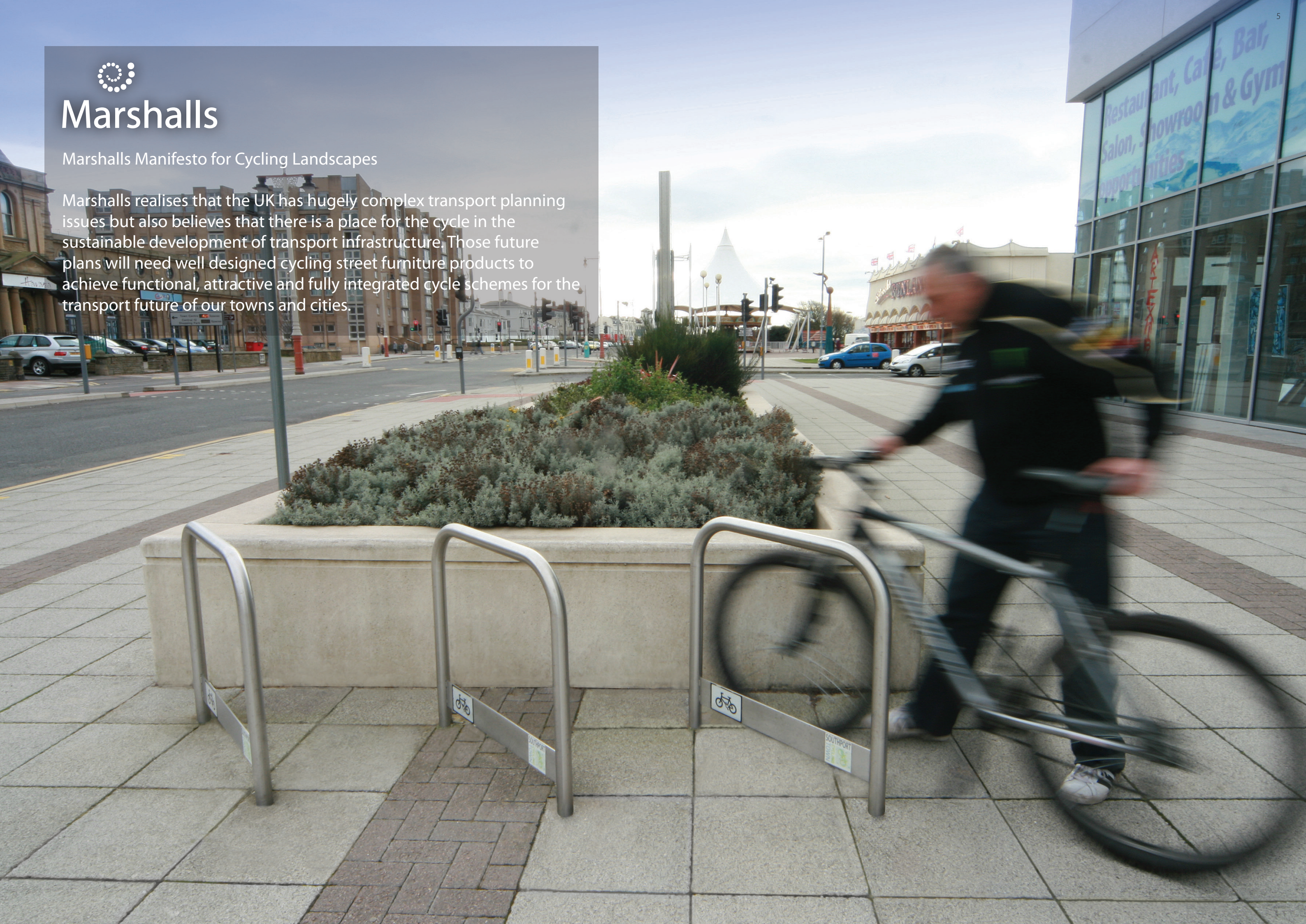
Niels Hoe CEO
HOE360 Consulting



Marshall's

Marshall's Manifesto for Cycling Landscapes

Marshall's realises that the UK has hugely complex transport planning issues but also believes that there is a place for the cycle in the sustainable development of transport infrastructure. Those future plans will need well designed cycling street furniture products to achieve functional, attractive and fully integrated cycle schemes for the transport future of our towns and cities.



Cycling Landscapes



Cycling in Britain today has never been more popular nor more politically charged as a topic for debate

Parliament has endorsed targets for 10% of all journeys being made by bike by 2025, with significant new funding being made available to support cycling in the UK.

While none can argue with the social, economic and health benefits that cycling offers, there is no doubt that the environmental infrastructure of Britain's public realm was never developed with the cyclist in mind, and at best it has only been an afterthought.

Now, however, there is an impetus for change, driven by the concurrence of critical transport planning issues alongside growing public support. Hence, a renewed policy focus on revitalising town centres through improved accessibility and encouraging smarter travel options along with the associated health benefits.

Interest in cycling has been recently energised by Britain's success in the 2012 Olympic Games and Tour de France and supported by cycle campaigns from high profile politicians such as Boris Johnson, Mayor of London. Yet there's a bigger picture than the media coverage around all this and if the benefits of cycling are to be enjoyed by a much broader audience, everyone needs to be convinced to join the swelling numbers of cyclists, regardless of gender, age, ability, fitness and ethnic origin.

Principles and Practice

Key requirements of cycling infrastructure are to be:

- Safe for all users in order to minimise road accident rates and encourage more frequent journeys by bike
- Convenient and integrated with local network links; continuous and logical, connecting key public transport access points with work, education and leisure destinations
- Inclusive: the needs of the less able bodied need to be taken into account in order to encourage diversity in both age and ability and on-street cycle parking and street furniture must not present a hazard to pedestrians
- Comfortable to use by employing high quality materials and maintaining all roads, pavements and street furniture to a high standard
- Attractive to all users in order to encourage higher levels of useage
- Bike security is another significant factor in people's choice to cycle hence, an allowance must be made for secure bike parking both at the start and end of the journey
- Adaptable to allow for swelling numbers of cyclists in future and flexible enough to address future need

Taking London bus journeys as an example, over the next 10 years London transport expects to have to accommodate an additional 167 million passenger journeys





In order to create this type of environment, cycling must be viewed as a legitimate mode of transport and stakeholders need to demonstrate strong strategic leadership skills.

It is also vital for designers, engineers and planners to collaborate in order to create better and safer cycling landscapes.

Cycling is convenient and practical and delivers a broad range of transport outcomes as well as wider environmental and health goals. Encouraging more people to cycle is increasingly being seen as a vital part of any local authority plan to:

- Tackle congestion on public transport systems
- Improve air quality in urban areas
- Promote physical activity (particularly in an aging population)
- Improve accessibility for all, minimising time, distance and effort

Population and Transport Growth - Is There a Role for Cycling?

With UK population estimated rise to 70 million by 2037, it's clear that our towns and cities will have to absorb ever increasing numbers, with commensurate pressure on living space and services – particularly transportation. Imagine your current rush hour experience... and then some! Take London bus journeys as an example: over the next 10 years London Transport expects to accommodate an additional 167 million passenger journeys per year, clearly leading to more buses/ bigger buses. If nothing else changes, the expectation is more traffic congestion, emissions, pollution, pedestrian overcrowding, with greater numbers of private vehicles being forced onto already congested roads.

Is it any wonder that Boris Johnson wrote:



"The reason I am spending almost £1 billion on this is my belief that helping cycling will not just help cyclists. It will create better places for everyone. It means less traffic, more trees, more places to sit and eat a sandwich. It means more seats on the Tube, less competition for a parking place and fewer cars in front of yours at the lights. Above all, it will fulfil my aim of making London's air cleaner. If just 14 per cent of journeys in central London were cycled, emissions there of the greatest vehicle pollutant, NOx, would fall by almost a third and over the years literally thousands of lives could be saved."

Boris Johnson's Vision for Cycling in London

Spearheaded by the capital, many regional initiatives are being developed to encourage cycling within sustainable transport strategies that accommodate all road users. In the last 10 years cycle ownership in London has increased by an impressive 110%.

Brighton and Hove City Council is another great example, where the development of a safe, convenient and efficient transport system has been brought about through traffic calming measures and dedicated cycle ways that specifically encourage cycling. The project has successfully discouraged unnecessary private car journeys and changed social patterns of behaviour towards both public transport and the use of cycles within the local area of operation. Similarly, the 'Get Britain Cycling' campaign recognises that York, Oxford and Cambridge have all become cycling cities within the last 5 years.

The national picture is that 43% of the population already owns or has access to a bike and it is acknowledged that most active travel journeys take place on Local Authority roads. It is therefore fundamental that the importance of these bodies in delivering ever more cycling facilities and campaigns is recognised, in order to promote cycling to everyone in their area.

An important regional example of strong leadership is the Active Travel (Wales) Act, which was recently given Royal Assent and considered to be the world's first 'landmark' law. This Act makes it a legal requirement for Welsh Local Authorities to map and create fully integrated walking and cycling networks within the existing transport network. If only other UK Local Authorities were to follow this example.

Beyond Local Authority initiatives, central Government has also tasked the Highways Agency with 'cycle-proofing' Britain's roads. As the managers of England's motorway and trunk road network, it is the Highway Agency's responsibility to:

- Ensure that motorways and trunk roads do not present barriers to cyclists by providing segregation and safe crossing points
- Set the standards for highway authorities to provide cycling facilities where needed
- Ensure future changes accommodate cyclists' needs
- Provide guidance relating to cyclists' needs to highway engineers



Keeping Cyclists Safe



In cities with minimal cycling networks in place, how safe are cyclists and is investing in cycling transport infrastructure cost effective?

There are some encouraging statistics around the growing popularity of cycling: the Department for Transport (DfT) states that nearly a million people cycle to work either directly or as part of their journey and 26 million people (almost half the UK population) own, or have access to, a bike. Yet without dedicated attention to the accommodation of cycling as part of our core transport systems, other statistics make less promising reading:

- 2013 figures (from the DfT) show an increase in cyclists' death and injury in England and Scotland, with lorries and HGV as the main source
- RoSPA confirms 75% of cyclist accidents occur at road junctions, and 80% in daylight
- 2012 figures (DfT) illustrate that of the 196,000 reported road casualties almost 10% were cyclists

Here's another recent viewpoint about road safety from Chris Boardman (Olympic cyclist, former World Champion racer) urging people to get behind British Cycling's road safety campaign. Talking about the need for a cultural shift in the UK and highlighting the point that the key to making Britain's roads safer is the Government putting cycling at the heart of transport policy, Boardman told BBC Breakfast:



"What we need is to stop and say 'where do we want to get to?'. It's the environment that will make it safer. The government needs to get more people riding bikes. 300 miles away in Denmark people are riding bikes in their suits on their way to work, for leisure, and everyone is happy. We need to change the philosophy around road design."

"The emphasis shouldn't be just on the cyclist. We're creating a symptom without looking at the cause. If someone gets shot on the street, the answer isn't that everyone should wear body armour. You say, hang on a minute, maybe we need to look at the reasons behind this?"

Chris Boardman, Olympic Cyclist, former World Champion

In order to attract more people onto their bikes, a safe network of cycle routes, blended seamlessly with other transport modes, is required.



Many cycling-related developments, such as cycle lane segregation, junction modifications and road quality improvements bring benefits to the longevity of a scheme and also create conditions which can promote a reduction in road casualties and also air and noise pollution.

Sustrans is a British charity that promotes sustainable transport. The charity works on projects that encourage people to walk, cycle and use public transport, giving people the choice of "travelling in ways that benefit their health and the environment". Sustrans defines the objective of good design as "creating a safe and comfortable cycling experience for the entire end to end journey". The quality of this experience is directly related to the quality of the design and capabilities of the infrastructure and every design must be economically viable and sustainable, visionary and popular within the community. Marshalls concurs with this definition and believes that every project is unique, often demanding bespoke design solutions to deliver integrated multimodal transport infrastructure.

Key factors in quality road network designs are:

- Generously spaced pedestrian and cycling routes
- Predictable lane crossings and safe cycling lanes
- Robust, accessible, well connected routes for cycling and walking
- Transit systems that connect all parts of the city and the surrounding region.

The quality of a safe cycling experience is directly related to the quality of the design and of the facilities and existing infrastructure

Why choose Marshalls for Cycling Landscapes?

Marshalls is unique in offering a complete end-to-end solution for cycling infrastructure: parking, shelters, surfaces, lighting, signage and street furniture.

Marshalls believes in freeing its customers to design, specify and project manage, safe in the knowledge that their selected landscape supplier will deliver the selected products on time, on budget and fit for purpose. Through the sector knowledge and diverse technical expertise available within its specialist businesses, Marshalls adds value to every project.

How the Specialist Businesses work

The Marshalls Group offers a fully integrated service through its specialist businesses. Between them they provide specifiers, engineers and contractors with a comprehensive menu of landscaping products that include: paving, block paving, walling, mortars and screeds, water management, kerb, natural stone, traffic calming, coordinated street furniture, lighting, signage and urban structures.



Marshalls

Creating Better Spaces



Support Network - how Marshalls can help:

- **Project Consultants** provide support from project inception to completion. They offer advice on material selection and integrated product design and are the single point of contact for specifiers, coordinating assistance from Marshalls' Commercial Account Managers, Engineers and Design Team.
- **Technical Street Furniture Specialists** offer support to the specification of street furniture, lighting, signage, traffic calming, structures and railing systems. Whether standard or bespoke products are required, the team of regional specialists will assist with the delivery of the project from design to installation. An installation service is also available.
- **Design Engineers** are on hand with state of the art software to provide linear and permeable drainage design, pavement structural designs, paving layouts to aid site installation, 3D component design and product take-offs for compiling bills of materials.
- **Technical Engineers** are regionally based to provide local site support with onsite designs and take-offs and structural and hydraulic calculations. They can produce 'easy to order from' schedules with item codes and the guidance and advice to ensure smooth installation and handover.
- **Commercial Account Managers** manage the supply of Marshalls' products and are again a single point of contact directly for contractors, sub contractors and merchant during tender and construction. They manage the scheduling of direct to site deliveries and are responsible for negotiating and pricing.

SINGLE OPTION DEVELOPMENT ► DETAILED DESIGN ► CONSTRUCTION ► TESTING & COMMISSION ► SCHEME HANDBACK



Marshall's Cycling Product Examples

Typical cyclist environments with examples of products from Marshall's that will enhance the journey experience



Cycle compounds lockable cycle parking area, discouraging unauthorised access while offering weather protection



Lighting Superior designs of exterior lighting manufactured to the highest international standards



Block Paving Comprehensive choice of block paving colours to create distinct cycling tracks designs which blend with the surroundings



Cycleway Tactile Tactile Demarcation for safe access and indication of cycle routes.



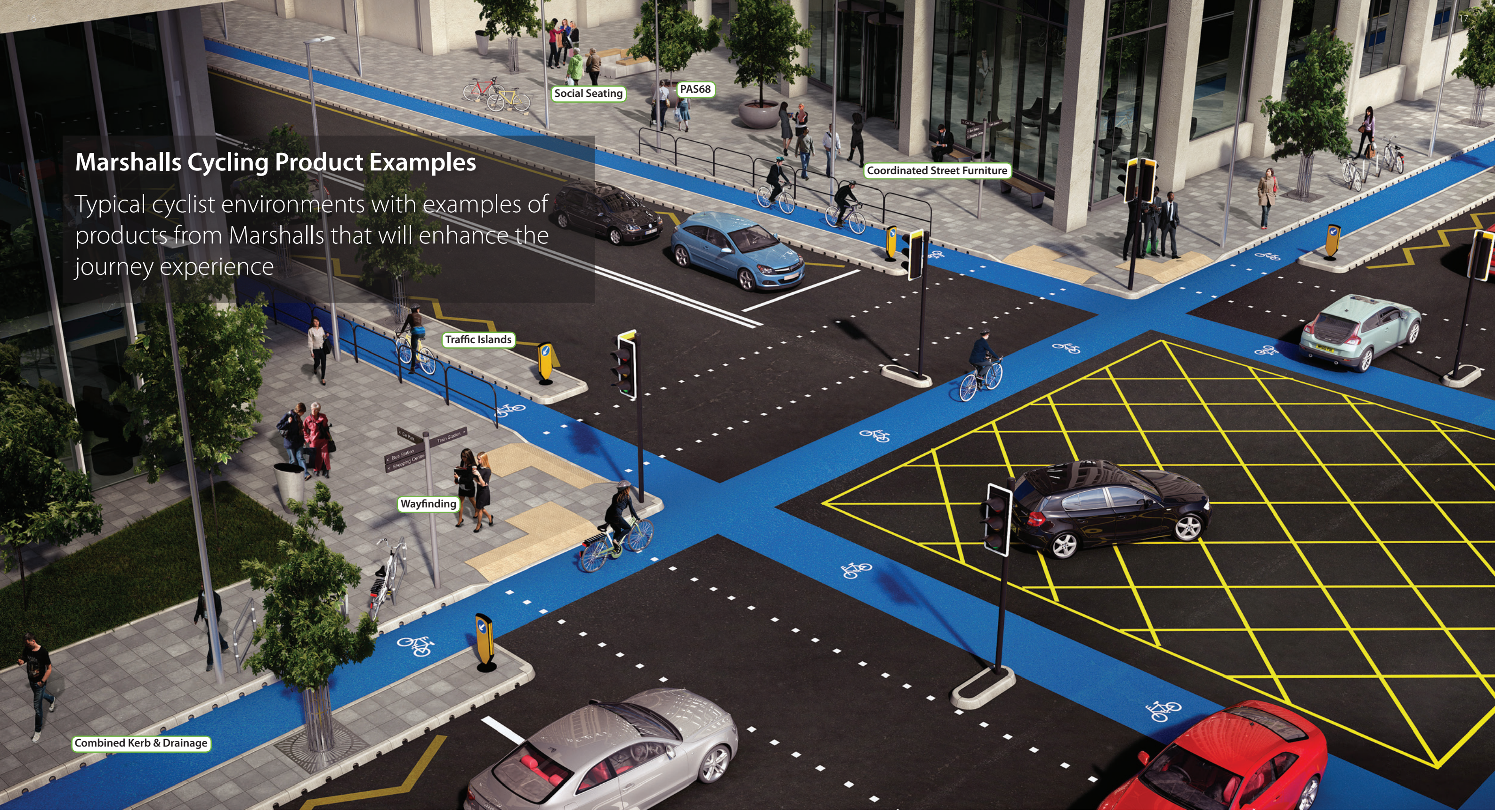
Seating Collection of comprehensive street furniture designs and materials to fit any type of environment



Traffic Calming Prioritising pedestrians and cyclists on the road, keeping them safe by lowering vehicle speeds

Marshall's Cycling Product Examples

Typical cyclist environments with examples of products from Marshall's that will enhance the journey experience



Coordinated Street Furniture
Offering coordinated contemporary design for great value, enhancing the sense of place



Social Seating Connecting people and places, able to fit within any landscape by using the right materials for your project



Combined Kerb & Drainage Cost effective and robust linear drainage systems to suit all required capacities, keeping your city clean and all users safe and dry



Wayfinding Clear directional information with fingerposts and sign boards; bespoke solutions available to match your project



PAS68 successfully crash tested, aesthetically designed street furniture to protect all users and infrastructure, achieving peace of mind in proportion with all levels of risk, vulnerability and project budget



Traffic Islands achieving carriageway width reduction or flow deflection of vehicular traffic, keeping cyclists and pedestrians safe particularly in complex junctions



Marshall's Cycling Product Examples

Typical cyclist environments with examples of products from Marshall's that will enhance the journey experience



Litter Bins Styles and materials to coordinate with chosen seating and other outdoor furniture, keeping the area clean; PAS68 version available for extra infrastructure safety



Cycle Shelters Impressive designs for effective protection of your bike from the elements; bespoke solutions available to match any project design



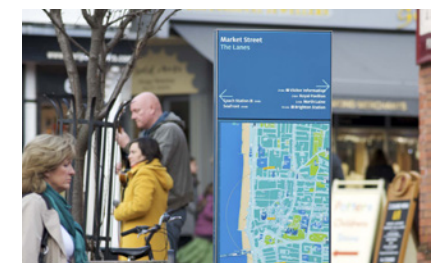
Bus Stop Kerb Separating cyclists from buses at bus stops in city centres, train stations and neighborhoods



Bespoke Paving Matching existing paving colourways, adding value to help you create a safe and personalised cycling scheme featuring unique designs, colours and finishes



PAS68 Successfully crash tested, aesthetically designed street furniture to protect all users and infrastructure, achieving peace of mind in proportion with all levels of risk, vulnerability and project budget



Signage Updateable directional slats, illuminated mapping and technology integration in a single frame to match your project and the architectural surroundings



This section covers recommended products for use in the cycling infrastructure within the public realm.

The depth of product ranges manufactured by Marshalls is the largest of any landscaping company in the country and the products shown represent only a small fraction of those available.

For a comprehensive product itinerary refer to Marshalls Product Selector or visit the up to the minute product website at www.marshalls.co.uk/commercial.

A select group of products ideal for creating safe cycling infrastructures. Speak to our Project Consultants for more product inspiration.

Marshalls Cycling Products

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Pluto Steel Shelter, Network Rail





Sheffield Cycle Stands in Stainless Steel with bespoke Tapping Bar/Sign Strip, Southport

Over the past ten years, there has been a significant trend towards providing a more sustainable transport infrastructure. This has been driven by work being carried out by charity organisations such as Sustrans and independent bodies such as Cycling England. Both are committed to promoting sustainable travel, in particular cycling to our places of work and schools.

One initiative promoting cycling across the UK is the National Cycle Network which operates over 230 million journeys each year, taking people to work and children to school. In addition to this, there are other schemes such as 'Bike It' and 'Safe Routes to School'. More details on either of these can be found at www.sustrans.org.uk and www.saferoutestoschools.org.uk

Sustrans is one of the UK's leading sustainable transport charities, with the aim of reducing the environmental impact of transport and enabling people to choose active travel to benefit their health.

A key element in encouraging more people to adopt sustainable travel methods, such as cycling, is the provision of adequate facilities within our public spaces and schools. This incorporates ongoing development of a high quality cycling infrastructure, prioritising route design and selection, signage and cycle parking facilities.

Marshall's cycle stands and shelters provide cyclists with an ideal solution to safely secure and store bicycles whilst not in use. A wide variety of stands is available in steel and stainless steel, with a selection of styles offered to complement any landscape.

Concrete cycle stands are created using the latest in technology and design, blending seamlessly with the surroundings.

Steel cycle stands are hot dip galvanised, giving excellent weathering qualities, and can be powder coated in a full range of standard RAL colours.

Stainless steel cycle stands are manufactured from grade 316L stainless steel, meaning that they offer excellent corrosion resistance and require very little maintenance to retain their original contemporary appearance.

Most of the existing cycle stands can be created in Ferrocast®, assisting you in creating stunning, robust landscapes.

PLUTO SHELTER



Length: 4000mm
Width: 2127mm
Capacity: 10 Cycles
Fixing: Base Plate

SATURN SHELTER



Length: 2042mm
Width: 4800mm
Capacity: 10 Cycles
Fixing: Sub-surface, Base Plate or Root

VENUS SHELTER



Length: 4120mm
Width: 3858mm
Capacity: 20 Cycles
Fixing: Surface or Base Plate

WATERSIDE II



Span: 460mm
HAG: 850mm
Fixing: Root Fix or Base Plate

SHEFFIELD CYCLE STAND



Diameter: 48mm
Span: 750mm
HAG: 750mm
Fixing: Ground Fix or Base Plate

R10 SENIOR CYCLE RACK



Length: 3000mm
Height: 629mm
Capacity: 10
Fixing: Root, Base Plate or Wall

ESCOFET RAVAL SLIM CONCRETE



Length: 760mm
Height: 990mm
Fixing: Embedded

BYKEBIN™



Length: 1250mm
Height: 1650mm
Capacity: 1
Fixing: Surface

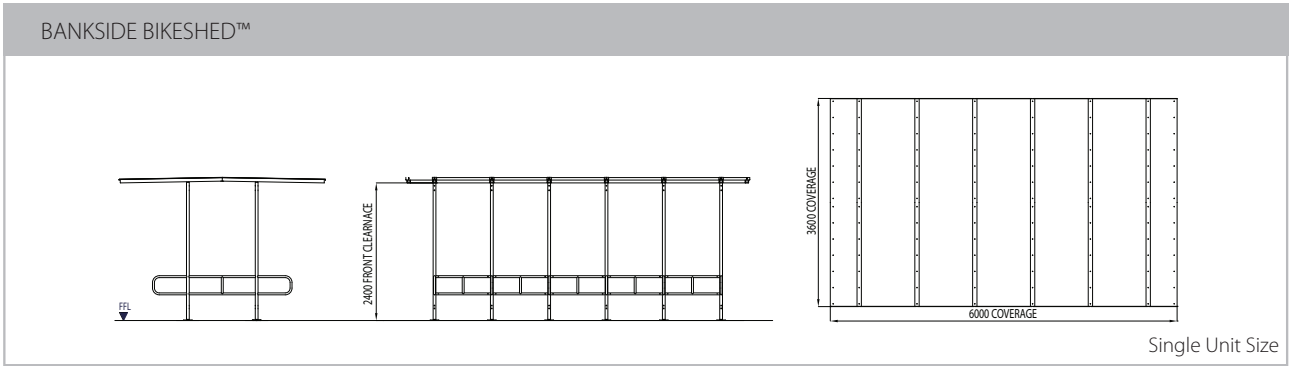
UPRIGHT CYCLE STAND



Length: 490mm
Diameter: 42mm
Fixing: Ground Fix or Base Plate



Bankside Bikeshed™ Cycle Shelter, London School of Economics



The Bankside Bikeshed was conceived by architect Martin Ebert from Studio Meda. As part of a competition to design a cycle shelter run by Better Bankside, a business improvement district in London, the Bankside Bike Shed was nominated the winner.

The Bankside Bikeshed is extremely minimal in design, ensuring that it blends well within any landscape. The design also makes it extremely economical per cycle space, with minimal physical dimensions and simplicity of installation.

Height: 2400mm
Length: 6000mm
Width: 3600mm

Capacity: 24 Cycles

OPTIONS

Fixing: Surface, Base Plate or Root

Finish: Galvanised, Galvanised & Powder Coated or Zinc-Rich Primer & PC

10 Year Warranty



Motis Shelter with Sheffield Cycle Stands

MOTIS structures are made from a flexible set of standard elements that are used to create shelters with a suite of complementary street furniture and lighting.

MOTIS structures allow the specification of cost effective, high-quality, tailored facilities from a set of standard components. The result is a flexible system that offers style, practicality and functionality at a known cost and shorter manufacturing programme than bespoke designs.

Standard modules combine to create cantilevered and gull-wing shelters, waiting rooms, and retail, ticket or information kiosks.

Components may be finished in their natural state or painted for location identity. They can also be clad with an attractive suite of aluminium profiles for enhanced appearance and utility. Cladding profiles act as branding devices, ducts for power or data cables, locations for integrated lighting and signage and can protect the vulnerable areas of structures from vandalism.

The MOTIS structures can allow for integrated lighting and traditional and digital signage systems to assist travellers with wayfinding and passenger information.





Velozone 40 Cycle Compound, Langford Village School, Bicester

Velozone cycle shelters can also be specified as cycle compounds. Two or more shelters can be placed facing each other to create open compounds. End panels and security gates can be also be added to create secure compounds. Any number of shelters can be added depending on the space available.

Velozone compounds provide the following;

Benefits:

- Safety and security for the user by allowing all-round visibility
- Discourages unauthorised persons accessing and tampering with the cycles
- Weather protection to the rear and sides of the shelters
- 10 year paint warranty

Options:

- Security gates and end panels
- Can be fitted with cycle racks enabling users to fully secure the frame of their cycles
- Hasp and staple provided (on secure compounds) for padlocking gates (padlock not included)
- Walkway covers to fully enclose the compound.
- Partition

Height: 2100mm
Length: 4000 - 36000mm
Width: 2300 - 6000mm

Capacity: 10 - 200 Cycles

OPTIONS

Fixing: Base Plate

Finish: Galvanised, Galvanised & Powder Coated or Zinc-Rich Primer & PC

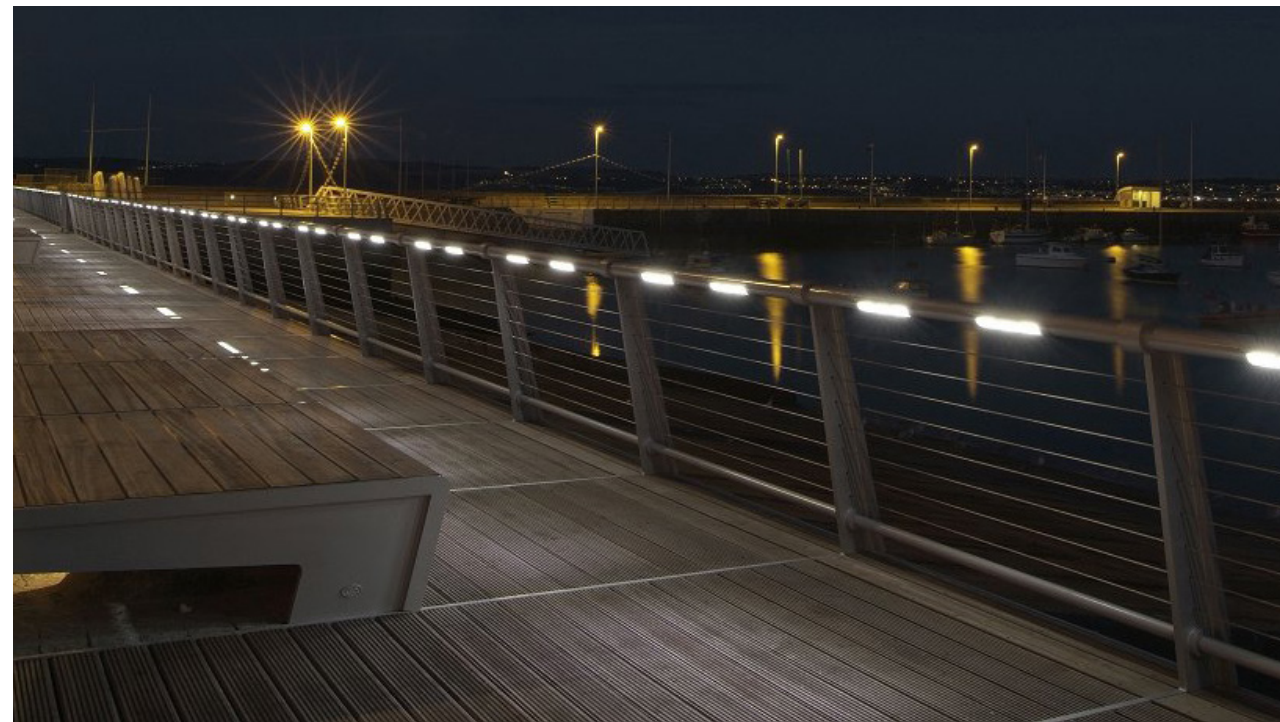
10 Year Warranty

Velozone Shelter



Length: 4000
Height: 1910mm
Capacity: 10
Fixing: Surface or Base Plate

For full specification, please refer to www.marshalls.co.uk/commercial



Torbay Post and Tension Wire System with bespoke seating

The objectives of a pedestrian restraint system are to sustain specified design loadings whilst blending with the environment, increasing the safety of pedestrians and other non-vehicular highway users and matching the architectural surroundings.

- Pedestrian restraint systems may take one of the following forms:
- Parapets: generally installed on bridges, retaining walls or other structures where vehicle traffic is excluded, used by pedestrians, equestrians and cyclists.
- Guard Rails: installed to control pedestrians, equestrians or cyclists on footways/paths bridleways etc, but not used on structures.

The materials used to create these systems vary from steel to stainless steel and Ferrocast®, the modern alternative to cast iron.

Steel and stainless steel are usually found in city centres, at junctions and in crowded places with high volumes of traffic, whereas Ferrocast systems are suitable for all environments especially seaside surroundings, as the material will not rust or corrode, can be cleaned easily and has a high chip, abrasion and vandal resistance.

Our design team works closely with specifiers and architects. Where necessary, Marshalls can design solutions to BS EN 7818. By choosing Marshalls for your post and rail systems, you benefit from:

- Experienced internal and external specialists to assist you with specifying your design, choosing materials and meeting budgetary requirements
- An expert project engineer who will talk you through any installation queries
- An in-house project management team, dealing with your design
- The ability to design and manage a full range of solutions, including complex bespoke requirements
- An in-house installation team, providing professional, cost-effective solutions to ensure the highest standard of finish

For further information on the full range, please visit the website www.marshalls.co.uk/commercial

Dozens of guardrail styles are available from proven brand manufacturers backed by Marshalls quality guarantee.

WATERSIDE 5 RAIL



- Ferrocast
- PC any standard RAL colour
- Post height 1200mm

OLLERTON M3 AND FESTIVAL POST AND TENSION WIRE



- M3 Stainless Steel
- Festival Steel
- Post height 1200mm

For full specification, please refer to www.marshalls.co.uk/commercial



Perfecta Natural and Mistral Charcoal with Perfecta Bespoke Cycle inset Natural, Manchester

Designing the landscape to create an interesting cycling infrastructure, traditional or contemporary, Marshalls can provide a paving solution for any cycling scheme.

Marshalls offers a wide range of products to complement any cycling scheme. From demarcation to bespoke inlaid paving, all surface products comply or exceed the manufacturing and application Standards and are fully supported by product data sheets detailing all relevant information for compliance to the British and European Standards.

The ability to combine a skid-resistant and water-free surface cycle track is offered exclusively by Marshalls. By using Marshalls products, you ensure that your cycling scheme coordinates fully with the surrounding hard landscaping.

For full specification, please refer to www.marshalls.co.uk/commercial



Cycleway Demarcation Concrete Paving

Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.

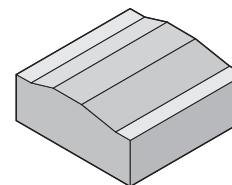


Natural*

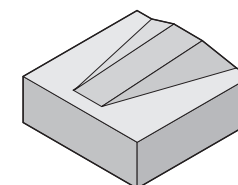
*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.

60mm 200 x 200 60 (base) 80 (contour)

STANDARD BLOCK



STOP END BLOCK



- To alert pedestrians, including the visually impaired, to the proximity of a cycleway.
- Provides a visual and physical indication to cyclists of the position of the central limit.
- Provides a visual and detectable underfoot warning to pedestrians.
- Product compliant to BS EN 1338: 2003.
- Ideal for a shared space, where kerbs are not an aesthetic option. This creates a safer environment for all groups of pedestrians, as well as alerting drivers to pedestrians crossing and the position of cycleways.
- Natural as standard; for further information on colourways to coordinate with your scheme, contact Marshalls on 0845 021 3223

For full specification, please refer to www.marshalls.co.uk/commercial



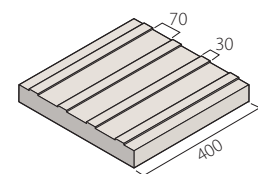
Cycleway Tactile and Bespoke Cycling Flag

Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations. For further information on the colour palette available, please contact our technical team on 0845 021 3223.



Buff Natural*
50mm 400 x 400



*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.

For full specification, please refer to www.marshalls.co.uk/commercial

- Indicating the start or end of shared pedestrian/cycle routes not delineated by differing levels.
- Running longitudinally with the direction of travel for cyclists. For guidance states, these are laid in a transverse direction to denote the pedestrian pathways. In both cases, four courses should be laid down, to be DDA compliant.
- A central delineation strip runs the length of the shared route.
- Provides a false kerb for visually impaired pedestrians.
- Product compliant to BS EN 1339: 2003.
- For further information on cycling infrastructure design, see LTN 2/08 and LTN 1/04 on www.dft.gov.uk or contact our offices on 0845 021 3223



Bespoke Cycle Symbol Paving, Inlaid and coloured to order



Traffic markings on roads and especially on cycle lanes can easily erode and fade. This is usually due to high volumes of traffic or the natural elements, creating two major issues:

- high maintenance costs for councils in the long run, and
- low visibility for road users, making it potentially unsafe and dangerous

This danger can be greater for pedestrians and cyclists; these groups need to feel and be protected as they are more vulnerable, especially during the hours of darkness.

To help both road users and councils with these issues, Marshalls bespoke cycle paving provides an ideal solution, matching existing paving colours and adding value to help you create a safe and personalised cycling scheme, featuring bespoke elements, unique designs, colours and finishes.

Design elements can be commissioned in elements such as concrete or a mixture of concrete with steel, stainless steel or Ferrocass[®], using Marshalls paving in contrasting or complementary colours, creating a fully integrated cycleway. Marshalls specialists and engineers will offer technical advice to take your or your client's creative concepts through to production. Design, manufacture, installation, scheduling and costs will be taken into account to ensure a smooth process with a great result.

For further bespoke products for cycleways to match town colours or designs, please contact our dedicated Technical Team on 0845 021 3223. Alternatively, visit <http://www.marshalls.co.uk/commercial> to see products designed to enhance and add value to your design, from street furniture to drainage and traffic calming measures.

For full specification, please refer to www.marshalls.co.uk/commercial



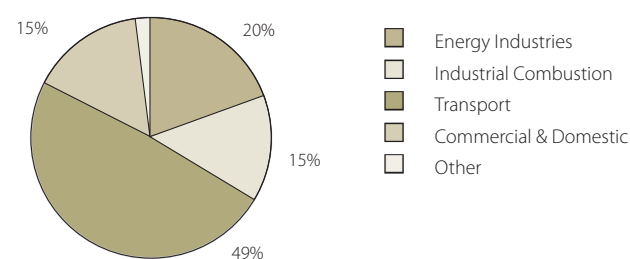
Clean air sustainable cycleways, healthier people

Noxer Paving – helping reduce pollution and clean city air

Encouraging walking and cycling is critical in order to promote healthier lifestyles and protect the physical well-being of societies. Among the infrastructure tools that planners use to mitigate the effects of air pollution in our towns and cities are greening policies and pedestrianisation, but these solutions are not always an option. Marshalls has developed another tool that planners can use, a paving solution that can help local authorities reduce levels of NO_x

The prosperity that societies have gained through industrialisation and urbanisation has been achieved at considerable environmental cost. One of the unfortunate consequences is an unacceptable level of atmospheric pollution. So it is high on the agenda of responsible post-industrial societies to restore a more sustainable environment by tackling the issue of air pollution.

In Britain and most of Europe, while the grime and smogs of

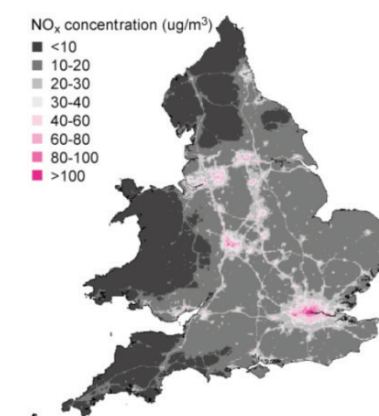


Source: UK emissions on air pollution 1970 to 2008. Report produced by AGA for Defra and the devolved administrators. August 2005.

uncontrolled industrial output were consigned to history decades ago, there are still air quality problems arising from our population density, our urban lifestyles and in particular our love affair with the car.

A significant pollutant is the emission of Nitrogen Oxides NO_x from combustion processes in vehicles, heating installations and industries. NO_x gases cause asthma and other respiratory problems and contribute to the creation of smog.

Almost half of NO_x emissions are from vehicles, so targeting urban centres where traffic, people and pollution are concentrated is essential in order to ensure air quality is at acceptable levels.



Source: UK Air Quality Archive (AEA Technology)
© Crown copyright. All rights reserved Defra.
Licence number 100022861 (2009)

A European directive is now in place limiting NO₂ levels within towns and cities. Local authorities are responsible for ensuring compliance but the task is considerable as it is estimated that at the end of 2010, 2,188 miles of Britain's roads exceeded average annual EU limits of 40µg/m³ of NO₂ ...so doing nothing is no longer an option.

Marshalls Noxer paving has been developed specifically to assist in combating NO_x pollution, creating sustainable urban trafficked areas and adding to people's wellbeing.



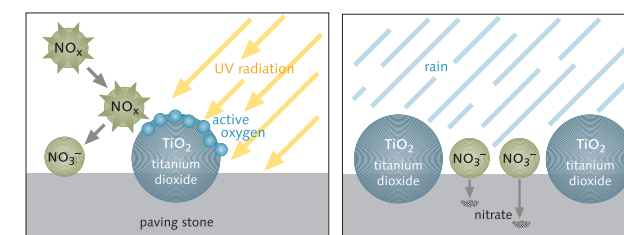
How it works

Marshalls has introduced Titanium Dioxide into the composition of Noxer paving, a chemical which has been discovered to produce a photocatalytic reaction with Nitrogen Oxides.

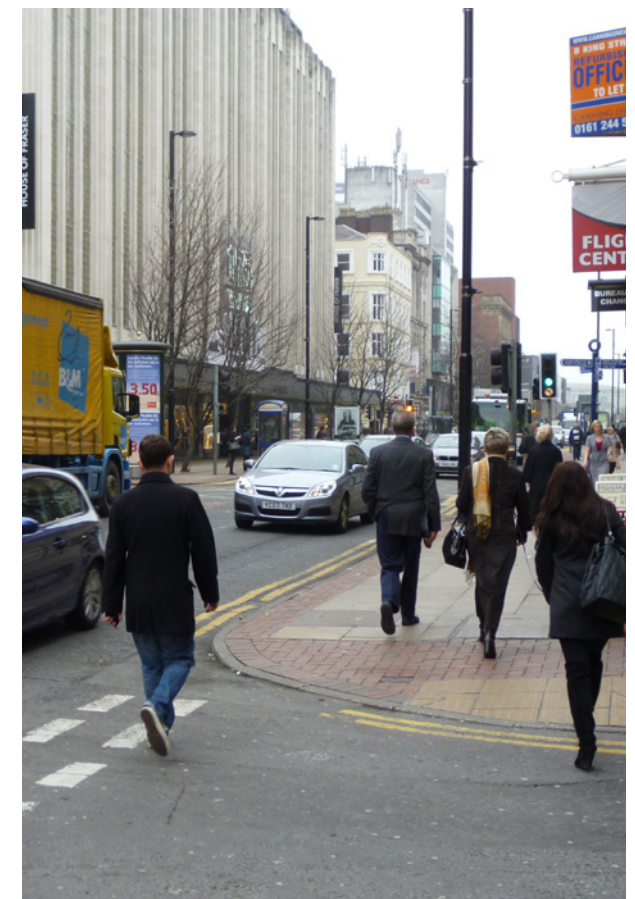
When encountered at the paving surface in daylight, NO_x gases are converted into soluble nitrates which wash away with rainfall.

The Titanium Dioxide regenerates after each chemical cycle; it never runs out.

Using this TX Active® licensed technology embedded into Noxer paving products, local authorities now have a working hard landscape solution that can help reduce NO_x levels within our inner city environments whilst also offering functional and aesthetic benefits.



Innovations only become part of everyday life and application where high quality standards are defined for all steps of the process. Noxer is tested to stringent standards, recognised through the TX Active® trademark; a guarantee of minimum photocatalytic activity.



The perfect environment for Noxer paving

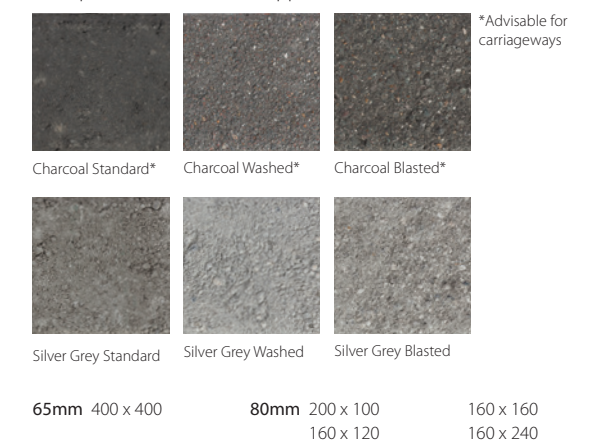
Where to Use Noxer:

- Urban areas with high traffic counts, low vehicle speeds and high buildings are likely to have high levels of NO_x circulating in ground level air streams.
- Pollution does not simply exist within the carriageway alone, wind and turbulence from car movement means that polluting gases from vehicle exhausts will move across the carriageway and onto the pavement.

Marshalls Noxer is:

- a Paving solution that can help reduce NO_x levels.
- an Engineering solution for pedestrian and trafficked areas.
- an opportunity to improve the aesthetics and health of our public spaces and its users.

Noxer Paving is available made to order in options that suit both pedestrian and traffic applications:



For full specification, please refer to www.marshalls.co.uk/commercial





La Linia, Grey Granite and Light Granite with La Linia Inlay stone blue, Greater London

Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.



Light Granite* Mid Grey Granite Grey Granite Anthracite Basalt



Indian Granite Yellow Verde Blue

60mm 200 x 100
300 x 200
300 x 300

80mm 100 x 100
200 x 100
200 x 200
300 x 200
300 x 300
600 x 300

65mm 400 x 400

*Ideally suited for low trafficked areas.

**Complementary Step Units available

Step Units**
(L x W x H) 1000 x 400 x 150
1000 x 350 x 150

For full specification, please refer to www.marshalls.co.uk/commercial

- High quality combined concrete block and paving range created through our partnership with Stein + Design.
- 8 colour finishes.
- 7 plan sizes with integral spacers.
- Step Unit available to complement La Linia Mid Grey Granite
- Uses high quality exposed aggregates across a broad range of integrated plan sizes, subtly textured finish
- Can be applied to generate striking visual effects through both colour and form.
- Face mix technology allowing the use of premium surface aggregates.
- Block paving suitable for use in any loading application.
- Compliant to BS EN 1338:2003.
- Bond Pattern: From simple to complex, traditional to contemporary
- Limitless design possibilities



Keyblok, Natural, Edinburgh

Colours

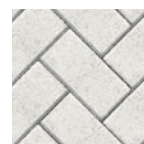
Precise colour and surface texture should be judged from actual materials rather than photographic representations.



Brindle Burnt Ochre Bracken Natural*



Charcoal Buff Marigold Red



White

60mm 200 x 100
65mm 200 x 100
80mm 200 x 100

*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.

- UK's most trusted concrete block paving. Highly durable with chamfered top surface profile, and pencil edges for a smoother cycling experience.
- Complements a wide variety of Marshalls cycling products
- 9 colour finishes as standard
- 200 x 100mm rectangular block paver with integral spacers.
- Suitable for use in any loading application.
- Compliant to BS EN 1338:2003.
- Bond Pattern: Herringbone, Stretcher Course, Basketweave.
- Keyblok can be machine laid. Please refer to the Machine Lay section on the Marshalls website.



For full specification, please refer to www.marshalls.co.uk/commercial



British Standard Kerb

Standard Kerb

'Manual for Streets' and LTN 1/11 'Shared Space' indicate the use of kerbs, usually of low height, to help the visually impaired and vulnerable road groups navigate their way through the area. Marshalls British standard kerb is the biggest selling kerb in the country.

- Marshalls uses hydraulic pressing in the manufacture of standard natural kerb*, channel and edging.
- Provides consistent long-term performance as expected from Marshalls with a functional unit of this type.
- All units are manufactured in accordance with BS EN 1340:2003 Concrete kerb units – requirements and test methods, together with a range of non-standard sizes manufactured to the same specification offering greater flexibility in design.
- All straight units are 914mm unless otherwise stated.
- Marshalls recommends the use of appropriate handling equipment in the installation of these products, and that installers work in accordance with current health and safety legislation. For further information contact Marshalls Technical Support on 0870 113344.
- Lengths and weights vary, see complete tables on website

*Some radius unit are manufactured in a wet cast production method.



Conservation Kerb, Charcoal, London

Conservation Kerb

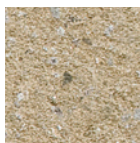
- Combines the appearance of Granite Aggregate with precision manufacture, further enhanced by a secondary shot blasting process.
- Kerb units based on proportions similar to traditional natural granite kerbs, measuring 255mm wide and 205mm high, or 145mm wide and 255mm high.
- Ideal for use in areas where a more attractive kerb unit is required.
- Product compliant to BS EN 1340:2003.
- A full range of complementary products are available – Conservation Paving, Edging, Setts, Mistral Concrete Block Paving and Mistral Piora.
- Conservation Kerb uses 48.3% recycled aggregates.

Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.



Charcoal



Harvest Buff



Silver Grey



Public transport access
builds better communities

Bus Stop Kerb, Derby

Separating cyclists from buses at bus stops in city centres, train stations and neighborhoods is key to the sustainable safety of cyclists and bus users.

- Marshalls Bus Stop Kerb is a smooth angled faced kerb with the option of channel usage.
- The channel unit includes a rumble strip enabling the driver to assess the position of the vehicle, allowing the distance to the kerb to be kept to a minimum, making the stepping in and out of the vehicle safer for all user groups.
- Varied upstands of between 100 - 250mm can be achieved for different entry levels of public transport vehicles.

- Can be used with or without the channel unit.
- Manufactured from hydraulically pressed concrete ensures long term strength and durability. The range includes left and right hand drop kerbs to a half battered profile.
- An external radius kerb unit enables features such as bus boarders to be created.



S-Ramp, Red, Huddersfield

S-Ramp is a pre-formed segmental sinusoidal profiled ramp system acknowledged as giving the best ride-over quality for all vehicles including buses and emergency vehicles, which cannot be achieved using in-situ methods.

In cycling schemes, an S-ramp is useful to denote pedestrian crossings passing through cycle tracks, without creating problems for the cyclists whilst ensuring safe passage for all users.

It enables road humps or table tops of up to 75mm high to be constructed in accordance with the Highway (Road Humps) Regulations 1990 and Road Humps (Scotland) Regulation 1991, as well as Traffic Advisory Leaflets TAL 2/96, 9/98 and 11/94. It is also compliant with Local Transport Note LTN 01/07 and 01/08.

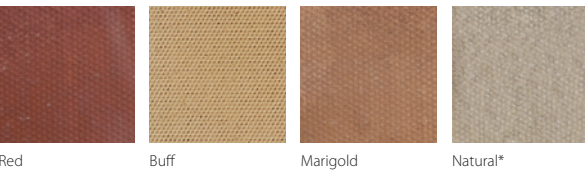
- Provides a highly effective, speed reducing transition from the carriageway to the surface of the road hump table top; compatible with Concrete Block Paving and black top.
- S-Ramp units can also be installed back to back to form road humps.
- Units can be laid kerb-to-kerb using standard pieces only. Alternatively, a free-standing table can be achieved by the inclusion of corner and side units.
- Durable construction created a low maintenance system which adds up to reduced Total Life Costings.
- Optimised thickness allows for haunching of the unit to aid stability, coupled with keyed base profile improving the resistance to imposed vehicle loads.
- S-Ramp is suitable for use in all forms of carriageway and highway construction.

Note: The joint between the adjacent units needs to be sealed ideally with Marshalls M-Flex sealant or any alternative material approved by an engineer.

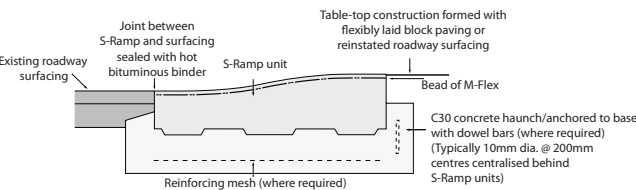
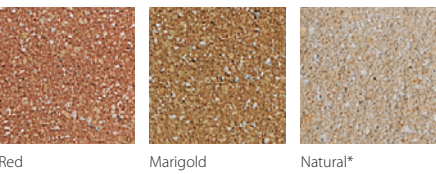
Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.

Pimple



Textured



Pedestrian Crossing, Ridgeway, Arnold

Traffic ramps are reinforced pre-cast concrete ramp units which form part of a road hump installation in accordance with the Highway (Road Humps) Regulations 1990 and Road Humps (Scotland) Regulation 1991, as well as Traffic Advisory Leaflets TAL 7/93, 8/96, 9/98 and Local Transport Note LTN 01/07 and 01/08. It is a vertical deflection traffic calming measure designed to slow motor-vehicle traffic in order to improve safety conditions for cyclists and pedestrians.

- Compared with in-situ construction techniques, pre-formed profiles require less skilled workmanship to achieve the correct profile.
- The substantial size and weight of the units ensure stability and suitability in locations where traffic is heavy and faster moving, such as arterial routes, highways and junctions.
- The profile creates a ramp 70mm high across a horizontal distance of 1 metre; this eliminates passenger discomfort whilst minimising noise pollution.
- Where ramps are installed in a residential area, Marshalls recommends installation 200m from the main entrance to the area.
- If the ramp is to be installed at a residential area, Marshalls advises to install these ramps at 200m away from the main zone entrance.
- Ease of installation technique ensures Right-First-Time construction.
- Ramps are designed to be low maintenance, minimising whole of life costs.
- Available in two profiles, Planar and Sinusoidal

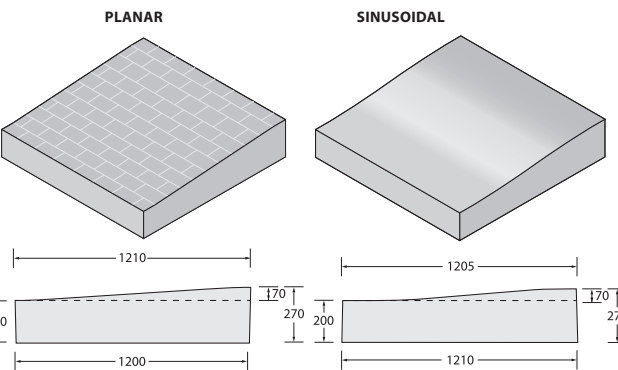
Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.

Planar



Sinusoidal





Speedcheck, Housing Development, Castleford, West Yorkshire

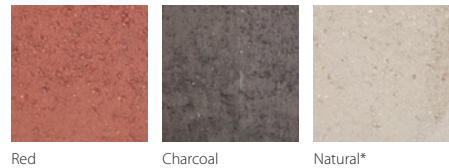
A Marshalls unique product offering, Speedcheck acts as a restraint and starter block for block paved ramp slopes of 1:10 and 1:15 inclination, where 1:10 and 1:15 is the steepness of the slope. For further information on the steepness gradients and their meaning, please call our technical team on 0845 021 3223.

Check complies with the Highway (Road Humps) Regulations 1990 and Road Humps (Scotland) Regulation 1991, as well as Traffic Advisory Leaflets TAL 7/93, 7/96 and 11/94. It is also compliant with Local Transport Note LTN 01/07 and 01/08.

- A multi-used cubic shape intended for use with flexibly laid concrete block paving, although other materials can be used. The V side of the block is used to start and end the slope, whereas the domed side is laid in the middle of the hump to give the designated inclination.
- Size and finish complements concrete block paving, allowing aesthetic consideration in road hump design for conservation or residential areas. For best results, it is advisable to use with Marshalls paving blocks.
- Ramp lengths of 1000mm will create a height of 100mm (maximum advised).
- Installation causes minimum disruption to carriageway, as excavation is only required beneath the ramp areas.
- Units are easily cut on site.
- Available in three colours: Red, Charcoal, Natural.
- Ideal for use and installation in historic vicinities and rural areas, as it will blend seamlessly with the surroundings.

Colours

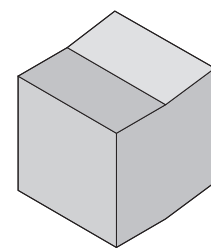
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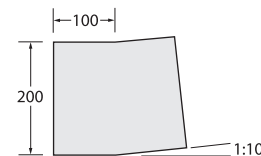
Red

Charcoal

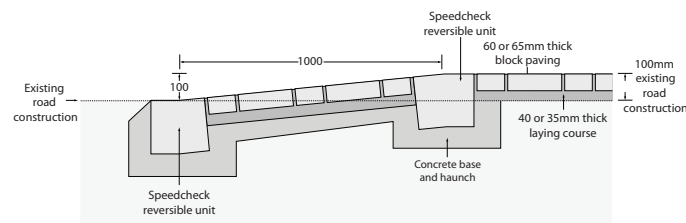
Natural*



Length: 200mm
Width: 200mm
Height: 200mm
Weight: 19.3kg



Approximate number of units per metre width = 5.



Demountable traffic islands with Blister Tactile Paving

A one-piece reinforced concrete part with no pedestrian facilities constructed in a carriageway to achieve carriageway width reduction or flow deflection of vehicular traffic.

One-piece construction ensures ease of installation with fewer operations and manpower on-site as well as limiting road closure times, resulting in significant project time and cost savings. For areas used by cyclists, the traffic island and tactile paving should measure 2000mm in both length and width; one of the specialist products offered by Marshalls. For further information please call 0845 021 3223.

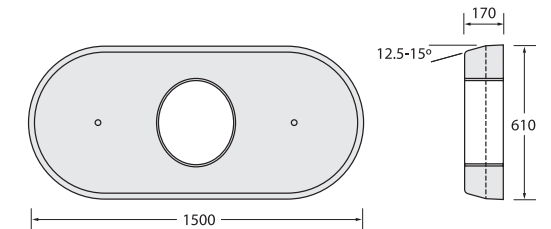
Satellite Island

- A Satellite Island is a one piece reinforced concrete pre-formed traffic island for discreet islands, including a circular aperture for a bollard.
- One piece construction ensures ease of installation with fewer operations on-site resulting in a speedier installation reducing road closure time.
- Pre-formed in factory controlled conditions to ensure accuracy.
- Offered in a half battered kerb profile as BS EN 1340:2003
- Speed of installation and low maintenance reduces whole life costings.
- 2 x M16 lifting sockets cast into product.
- Central aperture of 350mm diameter for installation of bollard.

Refuge Island

- A Refuge Island is a one piece reinforced concrete pre-formed traffic island, including an aperture for an illuminated 'keep left' bollard.
- One piece construction ensures ease of installation with fewer operations on-site, resulting in a speedier installation reducing road closure time.
- Pre-formed in factory controlled conditions to ensure accuracy.
- Offered in a half battered kerb profile as BS EN 1340:2003
- 3 x M16 lifting sockets cast into product.
- 400-450mm aperture for 'keep left' bollard.

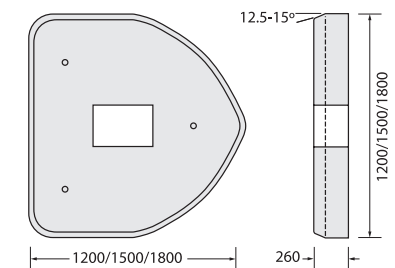
Satellite Island



Length: 1500mm
Width: 610mm
Height: 170mm
Weight: 670kg

M16 Lifting Loops

Refuge Island



Length: 1800mm, 1500mm, 1200mm as standard
Width: 1800mm, 1500mm, 1200mm as standard
Height: 260mm
Weight: 1587kg, 959kg, 581kg

M16 Lifting Loops



Cycling and Drainage

To avoid problems caused by water ponding and erosion during periods of heavy rainfall, cycle tracks should always be designed with adequate draining in mind. Gullies and manhole drains are commonly used next to crossing points and tie-ins; these can cause discomfort for cyclists.

Cycleways can be kept clear of erosion and ponding in many ways:

- By using permeable paving;
- By employing a side cross fall design of a specific inclination; the camber will ensure that the surface water does not create puddles of water, leaving the surface of the cycleway safe, clean and skid-free
- To avoid icy conditions on cycleways, Marshalls Mono Slot Drains can be utilised towards the end of the cambered edge design; the water will fall into the discreet yet efficient drain slot, leaving the cycle track safe as well as attractive and clean



Why Water Management Matters

Flooding is a growing problem all over the world, and particularly in the UK. It is happening more often for two main reasons:

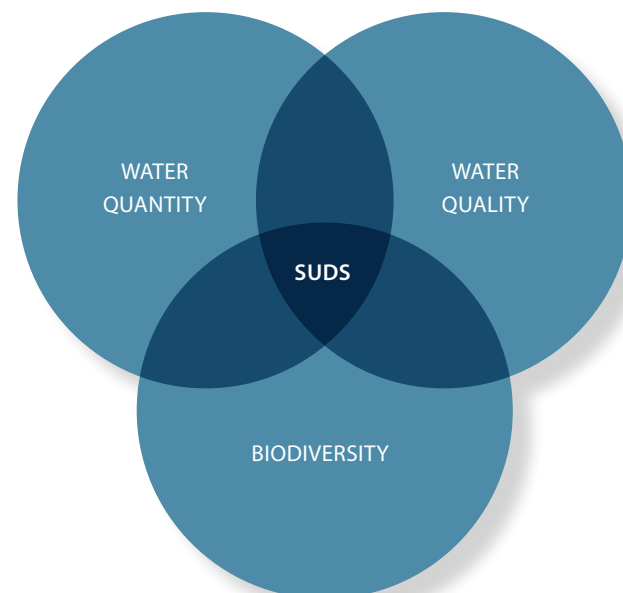
1. Weather patterns are changing, resulting in heavier, longer and more frequent rainfall events that our sewers were not designed to cope with.
2. Due to urban development, the water that falls onto hard surfaces is prevented from soaking naturally into the ground at source, and instead accumulates and runs off into overburdened sewers at high speed.

The combination of these factors mean that increasingly frequently, the capacity of our sewers is exceeded and excess water floods our cities, towns and homes.

The best way to combat flooding is to use a combination of good drainage design, adequate linear drainage and Sustainable Drainage Systems (or SuDS).

SuDS mimic natural drainage processes by preventing water from flowing straight into sewers, instead holding back attenuating the water and releasing it at a controlled rate. SuDS will also improve water quality and improve the biodiversity benefits of the local area by returning water to aquifers at source and encouraging the growth of lush, green landscapes.

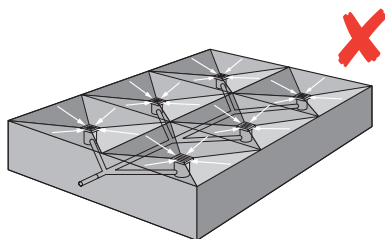
The SuDS Triangle



Types of Drainage System

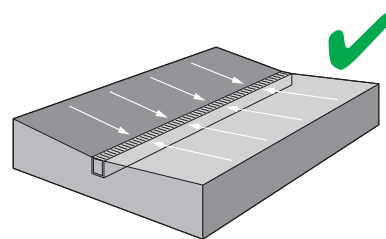
Point Drainage

Outfalls and pipes are complicated to design and install, resulting in an uneven surface which is incompatible for cyclists. Removes volumes of water.



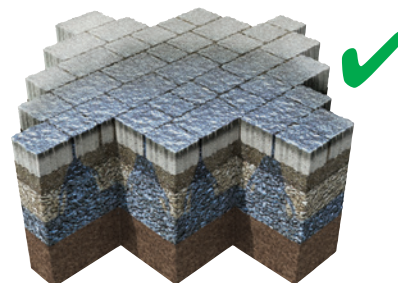
Linear Drainage

Simple falls direct water to easily installed channels. Removes volumes of water.



Permeable Paving

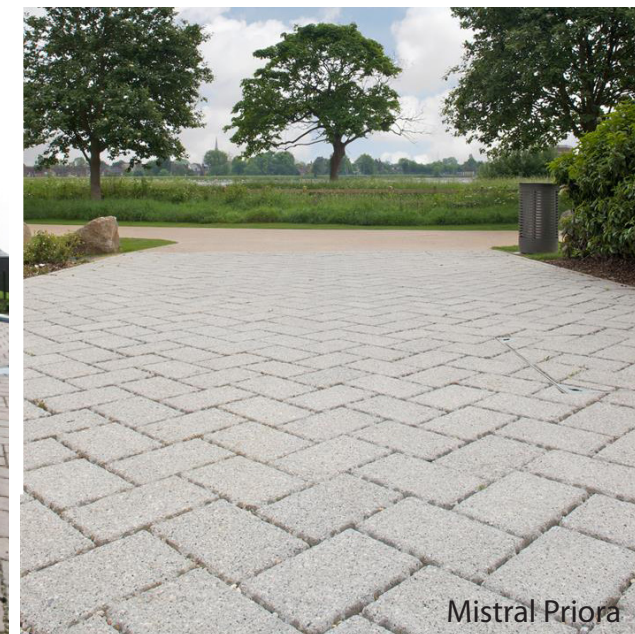
Rainwater falls into the sub-base at source, where it is stored until it can be safely released. Removes volumes of water and improves water quality.



For full specification, please refer to www.marshalls.co.uk/commercial



Tegula Priora



Mistral Priora



Olde Priora



Conservation Priora



Priora

Permeable Paving

Permeable paving is an ideal example of SuDS, creating an attractive load-bearing surface which allows water to soak into the ground at source.

Marshalls Priora is the best selling permeable paving system in the UK. Unique, patented nibs on the edge of each Priora block interlock to create a series of voids across the finished surface. These joints, when filled with Priora jointing aggregate, allow water to permeate through into a specially developed sub-base. The water is stored in this sub-base until it can be released into the ground or an accepting water course at a controlled rate.

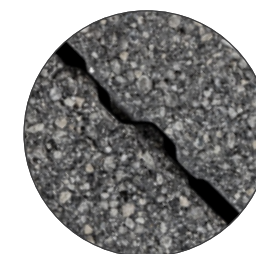
Ideal for creating safe and water-free cycleways in towns and cities with high rainfall levels.

Priora Permeable Block Paving: The Benefits

- Surface water is drained at source, keeping surfaces clean and safe.
- The unique patented Priora nib maximises rotational interlock between blocks, which means that Priora can now withstand any loading requirement
- The superior interlock provided by the nibs also means that Marshalls can reduce the depth of the sub-base required, driving cost from a Priora system

- Because water is returned to the water table at source, the green infrastructure in the area is encouraged, creating an ideal environment for wildlife and maximising biodiversity benefits
- Water that flows through a Priora permeable system is cleansed before being returned to the water table. Up to 95% of metal pollutants are removed.

For more information on the specification, styles and colourways of Priora, please visit www.marshalls.co.uk/wm



Featuring the patented Priora nib for maximum interlock

For full specification, please refer to www.marshalls.co.uk/commercial



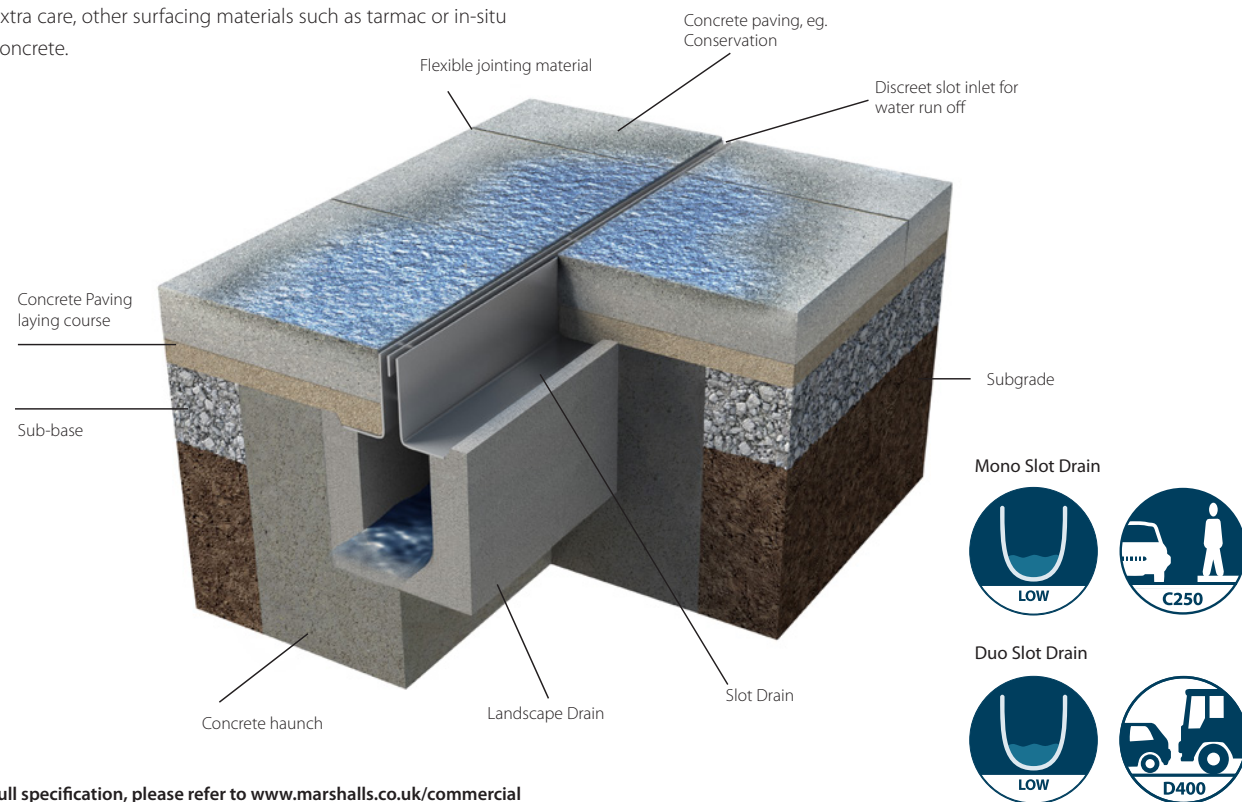
Duo Slot Drain



Mono Slot Drain

Slot Drain Features

- Discreet linear drainage system, available in 1000mm and 500mm lengths
- Single or double slot entry.
- Constant and inbuilt fall bases available.
- Bespoke solutions available.
- Mono Slot Drain Load Classification C250.
- Duo Slot Drain Load Classification D400.
- Ideally suited for all paved areas where discreet yet efficient drainage is required.
- Fully compatible with Marshalls range of paving materials and with extra care, other surfacing materials such as tarmac or in-situ concrete.



For full specification, please refer to www.marshalls.co.uk/commercial

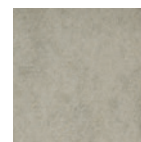
Slot Drain How It Works

- An innovative solution that combines a fabricated, galvanised steel slot drain top to a base channel unit.
- Both Slot Drain tops sit on top of the Landscape Drain Channel unit.
- Access units allow for maintenance of the channel system.
- Offset Duo Slot Drain available in 1000mm and 500mm heights



Colours

Precise colour and surface texture should be judged from actual materials rather than photographic representations.



Grey



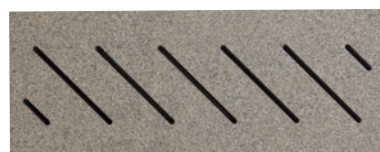
- The growing demand for more cost-effective and less complicated drainage systems has led to modern linear drainage becoming the preferred choice amongst specifiers and contractors.
- Marshalls new Mono Beany demonstrates our commitment to this growing market.
- Mono Beany is an extension of our original Beany Block, and alongside Mini Beany this new addition not only complements but completes our comprehensive Beany range of water management solutions.
- Manufactured from Marshalls M-Tec concrete, Mono Beany provides increased strength with less material. The casting of this high strength concrete around a rotationally moulded recycled plastic core is a first for combined kerb and drainage; and provides all the strength and aesthetic benefits of concrete with the reduced flow resistance characteristics of rotationally moulded plastic.
- Mono Beany offers versatility, available in both Half Battered and 45° Splayed profiles, in 500mm and 1000mm lengths, two invert depths and a full suite of problem solving accessories.
- Mono Beany achieves a load classification of D400 making it suitable for a number of trafficking applications including major and minor carriageways, car parks and commercial and urban scapes.
- Installation costs are further reduced and speeds increased due to only a single mechanical lift being required per meter.
- This one piece system is simple and straight forward to design and easy to set out and install. Cost effective and flexible with excellent surface drainage efficiency specifically designed for low to medium flow capacity. Inlet apertures are 500mm apart, reducing running or fast flowing water on the carriageway and eliminating ponding.
- Mono Beany carries the British Standard Kitemark, is certified to BS EN:1433 and is CE approved.

For full specification, please refer to www.marshalls.co.uk/commercial





TOP STYLES

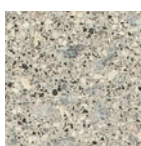


Colours

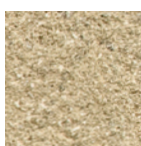
Precise colour and surface texture should be judged from actual materials rather than photographic representations.



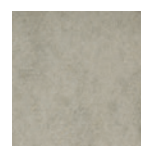
Grey



Silver Grey



Buff



Scoutmoor
Yorkstone



Mid Grey Granite



Silver Grey Granite



Pave Drain is a unique aesthetic solution that complements our most popular paving products and creates wider choice. Each top sits on our existing Landscape Drain channel offering a variety of invert depths and a comprehensive range of accessories. Pave Drain provides a water management solution for any urban scape.

Marshall's advances in high strength concrete combined with our experience in manufacturing the UK's leading paving products, have led to the development of Pave Drain.

A unique aesthetic solution that complements our most popular paving products and helps create a better landscape.

Available in three bespoke designs to provide the Landscape Architect with choice and flexibility.

Achieves a loading classification of D400 making it suitable for any road going vehicle.

- Available in Conservation Silver Grey, Standard Grey or Saxon Buff, most popular concrete products
- Pave Drain Natural Stone Units are also available in Scoutmoor Yorkstone stone, Mid Grey and Silver Grey Granite to complement Natural Stone paving schemes
- Each top fits the existing Landscape Drain channel which offers a variety of invert depths and accessories



Birco Drainage, Edinburgh

Birco Linear Drainage System

Birco is a high quality linear drainage system combining robust concrete channels with a range of grates to suit a variety of loading applications. It is designed to intercept, store and transport surface water in a cost-effective way.

- Robust and durable.
- Proven and trusted.
- High to low capacity.
- Wide range of channels and gratings.
- Constant and inbuilt fall channels.
- Manufactured in accordance with BS EN 1433:2002.

The range is extensive utilising six different systems;

- Birco Lite
- Birco 100
- Birco 150
- Birco 200
- Birco 300
- Birco Shallow*

Channels

Birco channels are manufactured in high quality, precast concrete. All channels incorporate rolled galvanised steel edge angles firmly cast into each channel to position and attach the appropriate grating.

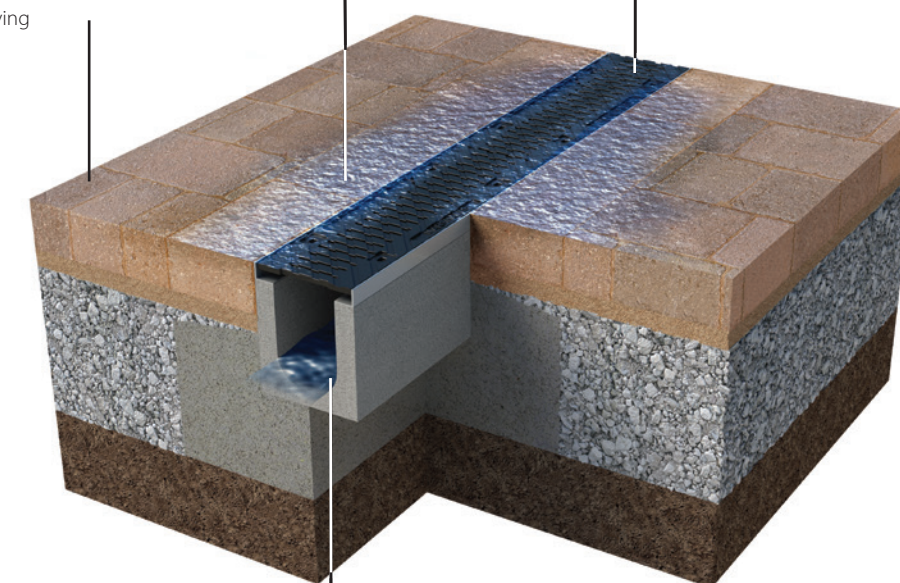
Constant Invert Depths

Channels are available in a range of standard constant invert depths to accommodate a range of drainage requirements.

Robust concrete Birco channels are highly resistant to impact damage on site during the construction phase.

Channels with removable gratings provide continuous inspection and access for maintenance.

Tegula Concrete Block Paving



Range of base depths and inbuilt falls to provide efficient drainage for all project types.

Extensive range of gratings, textures, colours, slot profiles and materials are available to the client.





Marshall's Street Furniture offers an extensive range of street furniture items covering counter terrorism, bollards, seating, litter bins, planters, notice boards, signage, lamp columns, protective barriers, post and rail, cycle parking and a wide range of structures.

Our brands offer products in an unrivalled choice of materials including concrete, precious stone, natural stone, cast iron, stainless steel, steel, polyurethane, timber, plastic and recycled plastic. Through our expertise and knowledge, support is offered from design to installation.

For projects where clients have their own designs in mind, Marshall's Street Furniture can assist with commissioning bespoke pieces. Our experienced team of Technical Sales Consultants and Design Engineers have delivered many prestigious projects and pieces in the past and would be happy to assist in adding unique designs to clients' schemes. Please contact us for more details on this service.

For full specification, please refer to www.marshalls.co.uk/commercial

SPHERICAL ILLUMINATED BOLLARD



- Concrete with lighting detail
- Diameter 700Ø
- Length 1000mm
- HAG 700mm
- Weight (with base) 444+165 kg

DEMETRA BENCH



- Precious Stone and timber (3 types to choose from)
- L x W 1800 x 600 mm
- Height 470mm
- Weight 1170kg

MONOSCAPE TREEPAVE TREE GRILLE



- Concrete with Steel frame
- Conservation, Perfecta or Saxon paving to complement existing paving
- Woodland Trust branded version available
- Ferrocass version available

IGNEO LITTER BIN



- Concrete with Ferrocass details
- Capacity 120L
- H x W 1170 x 900 mm
- HAG 1170mm
- Weight 400 kg

LINK HIGH TABLE AND PERCH SEATS



- Ash timber
- Table: L x H 420 x 1100 mm
- Seat: L x H 420 x 880 mm
- 4 Anchoring points
- Surface mounted

RB60/SS HOOP BARRIERS



- Diameter: 60Ø
- HAG: 650mm
- Also available in Steel

OVITO PLANTER



- Concrete, oval shape
- L x W 1040 x 480 mm
- Height 600mm
- Weight 270 Kg

OLLERTON M3 SEAT



- Either with Hardwood or Stainless Steel Slats
- L x H 1800 x 480 mm
- Optional length 2000mm, 2400mm or 3000mm

ESCOFET ABRIL



- Manufactured in the UK
- Reinforced concrete
- Free standing

For full specification, please refer to www.marshalls.co.uk/commercial





Loci Seating

Loci is a fresh concept in street furniture, lighting and signage designed to offer co-ordinated contemporary design for extraordinary value through a collection of cost effective pieces that will create or enhance a sense of place.

The flexible design of the Loci range has a distinctive lightness and transparency with a clear linear profile based around square forms. The eye-catching 'ribbon' element offers enormous potential for creativity within the core design.

Each piece has been designed to fit within a number of 'scapes' and is particularly appropriate for human scale projects such as hospitals, colleges and universities. Loci is also perfect for the affordable renovation and renewal of facilities, with the injection of colour that will distinguish and define specific areas making it well suited to retail and business parks.

Integral to the blueprint of the range is the introduction of distinctive colour to create exceptional elements of street furniture, which mirrors this increasing colour trend in built architecture. Each Loci element is available in all RAL shades**, so there are endless combinations to define your landscape project exactly as you visualised. However, not everyone wants to trawl through endless colour palette catalogues so we also offer a colour palette of coordinating colours to help your decision making.**

Through this tonal customisation, you can express and support a brand or local identity through every element of the landscape such as paving, furniture and planting.

** The Woodhouse Recommends colour palette are the standard colour offers. Charges may apply for other RAL colours, please ask for a quote.

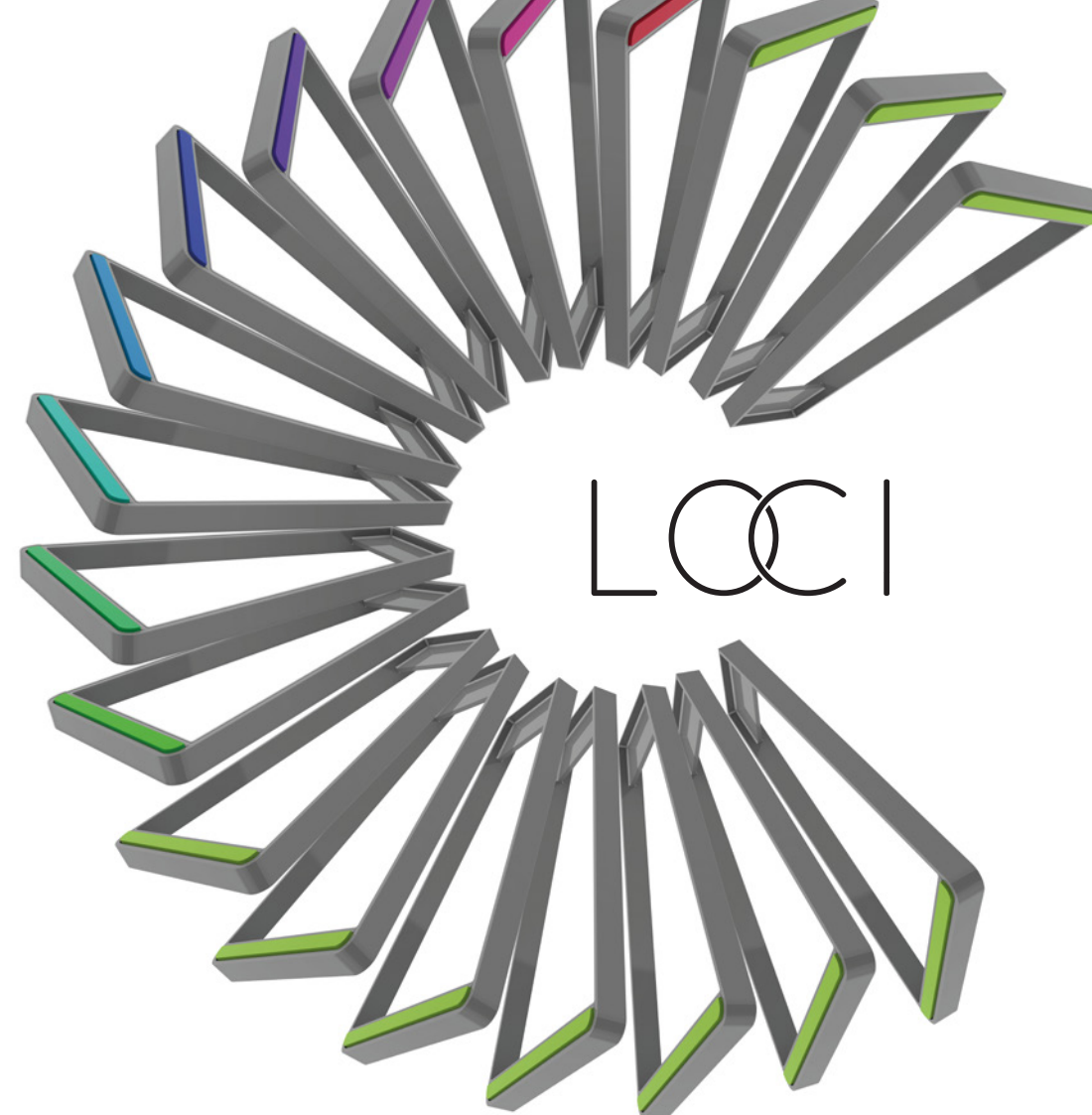
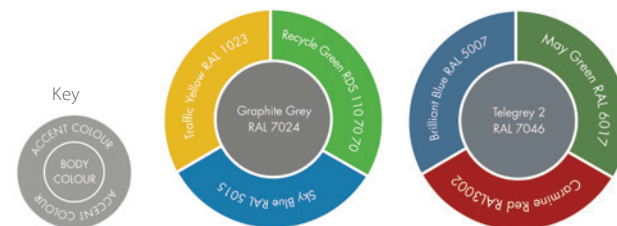
For full specification, please refer to www.marshalls.co.uk/commercial

EVERY COLOUR IS GREEN...

The colour is applied to the elements through a UV resistant polyester powder coat system that is Volatile Organic Compound and solvent free. The paint finish provides robust and durable protection and is matched with the ethically sourced Emerti timber and strong recycling credentials. You can be assured the Loci range addresses sustainability throughout the complete product life cycle.

In addition to material sustainability, the innovative lighting design is based on a modular LED concept ensuring low running costs. As the LED technology progresses, you can upgrade to the very latest cutting-edge LED modules for minimal cost, exponentially increasing CO2 reduction and energy saving as this emerging market matures.

Standard Colour Options



A comprehensive, vibrant and affordable range of street furniture, lighting and signage; designed by Maynard Design and manufactured by Woodhouse, Loci offers a complete solution for campus type environments.

- Light, open and colourful forms reflect growing trends for vibrant architectural and landscape designs.
- A signature 'Ribbon of Steel' design element appears consistently throughout the range, the offer includes seating, cycle stands, standard and illuminated bollards, a litter bin, monolith and fingerpost signage and street lighting.
- Colour customisation enables matching to any corporate branding or colour scheme.
- Cost efficient material and manufacture enable highly affordable pricing, with no loss of Woodhouse design values.
- Ethically sourced Emerti timber brings a fresh Scandinavian tone to the range whilst offering durability and low maintenance properties.
- LED lighting modules shared with the Coda luminaire deliver exceptional performance characteristics in a coordinated lighting package.
- A simple signage system delivers excellent value across a wide range of sizes.
- The range is soon to expand through the addition of a shelter, tree grille and planters.



For full specification, please refer to www.marshalls.co.uk/commercial



Coda Bollard

CODA



Standard Colour Options



SILVER GREY MID GREY ANTHRACITE

For full specification, please refer to www.marshalls.co.uk/commercial



Coda Bench with armrests



Coda Signage

A cohesive range of street furniture, lighting and signage; designed by Alex Lifschutz and manufactured by Marshalls at Sandy and Woodhouse in Leamington Spa.

- Contemporary forms complement both the newest architectural trends and established environments.
- Signature contrast and slash design details create identity that unifies the whole range, including seating, cycle stand, bollard, litter bin, monolith and fingerpost signage and street lighting.
- Robust materials and quality manufacture ensure long life and long term value.
- Ethically sourced Iroko timber weathers naturally, is highly durable and virtually maintenance free.
- Marshalls' concrete complements premium, granite-effect ranges such as Metrolinia and Conservation.
- High levels of recyclability provide excellent end-of-life credentials.
- Independently tested LED luminaire delivers excellent lighting performance, efficiency and Standards compliance.
- Seventy two lighting options across colour temperature, running current and module configuration for ultimate flexibility with a singular design language.
- Highly configurable signage system that incorporates updateable directional slats, illuminated mapping and technology integration in a signature Coda frame

For full specification, please refer to www.marshalls.co.uk/commercial

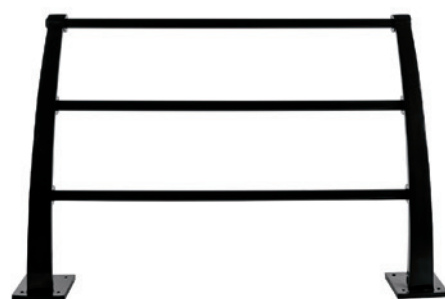


BETTER, WHATEVER WAY YOU LOOK AT IT.



Waterside II Seat
Height: 871mm
Length: 2110mm

DISCOVER THE **BETTER** ALTERNATIVE TO CAST IRON STREET FURNITURE.



Waterside Post and 3 Rail System
Height: 1200mm
Bespoke options available
Available in 3,4,5,6 and 7 rail options



Waterside II Cycle Stand
Height: 850mm
Width: 460mm



Waterside Bollard
Height: 1000mm
Width: 175mm
Weight: 35kg



Waterside Litter Bin
Height: 1011mm
Width: 450mm
Capacity: 130L

With Ferrocast® from Marshalls, you can design stunning landscapes exactly how you want, with a material that's as beautiful as it is robust.

Create classic or contemporary schemes that will suit any environment and stand the test of time.

The Waterside Range is based around a unique elliptical form, resulting in a stylish and functional selection of street furniture suitable for both modern and traditional landscapes.

Manufactured from Ferrocast polyurethane, The Waterside Range is extremely durable, won't rust or corrode, and can be supplied in any standard RAL colour, helping you create a better landscape with a better material.



Igneo seating is a co-ordinated concrete modular system that offers contemporary styling, combined functionality and maximum robustness. It currently consists of seating, litter bin and bollards which

can act as stools. The seating can be specified to any length, based on the module sizes, dependant on the location and the amount of seating places required.



Manufactured in Ferrocast® polyurethane, seating arm rests and litter bin doors will have a long life span and require little maintenance. Ferrocast parts can be ordered in any standard RAL colour.



With a high vandal resistance and anti-graffiti coating as standard, combined with the durability achieved from cast concrete, the Igneo series are extremely hard wearing; concrete weathers naturally and requires minimal maintenance.



Geo PAS 68 Litter Bin

Critical National Infrastructure

The Critical National Infrastructure is defined as any location with assets deemed essential for the functioning of our society and economy. Damage to this infrastructure can have a severe economic impact and could potentially cause large scale loss of life. Apart from key utilities, financial institutions and emergency services areas, Transport Infrastructure such as rail networks, aviation, maritime and road networks are in threat of vehicle born attacks.

Crowded Places

Crowded places are defined as 'any locations or environments to which members of the public have access and that may be considered potentially liable to terrorist attack by virtue of their crowd density'. These areas will remain attractive targets for terrorist groups, who have demonstrated that they are more likely to target locations which are easily accessible, readily available and provide an impact beyond the loss of life. The term 'Crowded Place' can apply to a wide range of areas throughout the public realm, **including:**

- Road and Highway Infrastructure
- Rail, Aviation and Maritime networks
- City / Town Centres
- Shopping Centres
- Leisure Venues
- Visitor Attractions
- Sports Stadia

For full specification, please refer to www.marshalls.co.uk/commercial



Giove Planter - Available in a PAS 68 Specification

Marshalls RhinoGuard™ PAS 68 Anti Terrorist / AntiRam Street Furniture

Marshalls Street Furniture's RhinoGuard™ range of counter terror products includes bollards, litter bins, cycle stands, seating and planters. All have been successfully crash tested to the BSI PAS68 standard for vehicle security barriers. We offer products in a wide range of materials including steel, stainless steel, Ferrocast™ Polyurethane, concrete and Precious Stone.

Our innovative systems can be integrated seamlessly into seating and planters allowing designers to conceal security measures when required. Shallow Mount Bollards are also available when deep excavation is not possible.

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. Depending on site specific conditions, such as the traversability of the surrounding landscape, it is not always physically possible for larger vehicles to reach the required speeds to carry out a successful attack. In these cases, lower, more cost effective levels of protection can be employed, meaning that tested security and peace of mind can be achieved in proportion with all levels of risk, vulnerability and project budget.

Our crash tested bollard cores can be sleeved in a variety of cosmetic designs in steel and stainless steel, to meet individual project requirements. Marshalls offer a full design and manufacture service for RhinoGuard™ PAS 68 bollards, which can also be sleeved with Ferrocast polyurethane in bespoke styles, to complement any surrounding environment.

PSSA

Marshalls is a member of the Perimeter Security Suppliers Association



RhinoGuard™ 75/30 Seat with Standard EOS Design

Marshalls has developed and impact tested an innovative frame structure, designed to fit seamlessly inside an array of seating styles, providing the ultimate in integrated security solutions. **The frame has been successfully crash tested using a 7.5 tonne (N2) lorry traveling at 30mph.**

This highly engineered RhinoGuard™ technology signals a remarkable breakthrough in the security industry, enabling exceptional levels of protection to be incorporated into the natural street scene, whilst enhancing both the functionality and design of our public spaces.

To provide architects with the ideal alternative to the use of traditional hostile vehicle mitigation measures, Marshalls Street Furniture has developed and successfully tested a high strength planter frame in accordance with PAS 68. For specification and successful testing information please download the PAS68 brochure from the Marshalls website www.marshalls.co.uk/commercial



Manufactured from Marshalls' fibre reinforced precast concrete, the **Igneo seating system** is further strengthened by our unique RhinoGuard™ technology, which is cast into the individual seating modules during the manufacturing process.

The Igneo seat has been successfully crash tested in accordance with PAS 68 using a 7.5 tonne (N2) lorry at 40mph



The Geo PAS 68 range, consisting of bollards, cycle stands and litter bins, offers a high level of hidden security against vehicular attack without compromising contemporary design or generating a sense of concern for the general public.

The RhinoGuard PAS 68 core within the bollard section guarantees a high standard of perimeter protection

For full specification, please refer to www.marshalls.co.uk/commercial





Coda Luminaire

Street lighting, marker and architectural lighting solutions from Woodhouse, Eclatec and LEC. Cutting edge LED technology, robust, flexible and creative luminaires and lighting units for high performance, energy efficiency and a sense of place.

Many more lighting solutions on www.woodhouse.co.uk

- High performing LED street lighting luminaire
- 72 options covering output, efficiency and colour temperature
- Independently tested and verified by Lux Tsi

For full specification, please refer to www.marshalls.co.uk/commercial



LOCI LUMINAIRE



- Colourful, vibrant LED street lighting luminaire
- 36 options covering output, efficiency and colour temperature
- Perfect for signature cycle routes with custom colour options

ECLATEC ZENDA



- Striking contemporary design
- Various lighting distribution and power options
- One of the extensive and innovative Eclatec street lighting range

LOCI ILLUMINATED BOLLARD



- LED functional lighting bollard
- Coordinates with Loci furniture, lighting and signage for signature cycle routes
- Ideal for low level, low impact lighting

LEC BOURGOGNE



- Circular in-ground LED module
- Withstands occasional traffic
- Numerous LED, directional, lens and colour and control options

BRUNEI



- Linear in-ground LED module
- Withstands occasional traffic
- Numerous LED, lens and colour and control options

PYRAMIDE



- Square in-ground LED module
- Withstands all traffic
- Numerous LED, directional, lens and colour and control options

VILLE DE PARIS



- In-kerb LED module
- Subtle ground level route illumination
- Numerous LED and lens options

PASSY & SCHOOL



- Passy linear in-ground LED module for facade and underpass lighting
- School handrail functional route lighting LED module
- Numerous LED, lens and colour and control options

BELVAL



- Linear LED module
- High-power LEDs with variety of lens options
- Ideal for street furniture integration for functional lighting

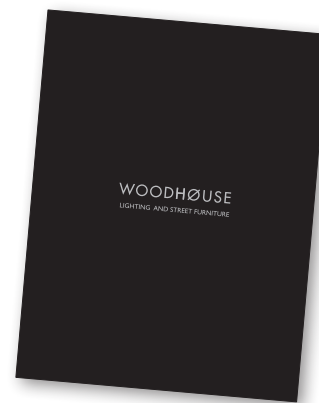
For full specification, please refer to www.marshalls.co.uk/commercial

Additional Customer Support



Street Furniture Product Selector

Products included in the brochure vary from bollards and seating to litter bins, planters, tree protection and cycle parking. Marshalls street furniture offer facilitates all architects and specifiers in choosing the right product for their scheme effortlessly and quickly. A wide variety of stand-alone products as well as comprehensive ranges and bespoke products. Marshalls offers everything needed to enhance impact of any scheme within the public realm, contributing to dwellers' well-being.



Woodhouse

A coordinated lighting and street furniture specialist for contemporary and bespoke design solutions.



RhinoGuard™ Product Selector

Showcases the full range of RhinoGuard™ counter-terrorism products, encompassing PAS 68 impact tested bollards, planters, seating, cycle parking and litter bins, designed to both protect and enhance public spaces. Supported online by www.marshalls.co.uk/pas68



Product Selector 3.0

Marshalls' most comprehensive catalogue, presenting products from across the group, including paving, block paving, water management and kerb. Includes details on company credentials and full product specifications.

This publication is supported by the PS3.1 supplement, which includes new products and product updates.



CPD Prospectus

Marshalls has invested considerable effort in its CPD (Continual Professional Development) programme which facilitates a structured sharing of knowledge. The CPD prospectus showcases an extensive programme of seminars, covering wide ranging subjects from permeable paving solutions to alleviate flood risk, to developments in hard landscaping, external lighting and sustainability.



Well-being in the public realm

Marshalls commissioned nef (the new economics foundation) to carry out research into looking at people's 'well-being' and how it is influenced by the built environment. The literature provides a summary of these findings, exploring the importance of well-being, the part the built environment plays in creating it and how Marshalls' products can support it.

Additional Customer Support

Scapes

Marshalls offers a range of sector specific collateral designed to support clients working within specific types of commercial landscape. Content includes expert opinion on topical industry issues and demonstrates Marshalls' experience and expertise through the presentation of products and services relevant to that scape.



Educational Landscapes



Rail Landscapes



Home Landscapes



Retail Landscapes

To order your copy of any of these publications call 0870 241 2463

The ideal cycling infrastructure is designed to meet the needs of all users, from pedestrians and cyclists to motorists and novice drivers:

- **Safe** for all users, from children to the elderly; this will minimise road accident rates and make users more confident to cycle to places
- **Convenient and inclusive** by being part of the main road network; continuous and logical, connecting places such as work, education and leisure without any effort while saving time, money and distance
- **Comfortable** to use by employing high quality materials and maintaining all roads, pavements and street furniture; this will assist in avoiding any unnecessary road accidents, as well as improve the surroundings

- **Attractive** to all users regardless of age or gender, attracting more people for work, school or leisure

- **A place where people want to be, want to live, want to belong**

In order to create this type of environment, the Government and Local Authorities need to improve their existing strong strategic leadership skills to generate a safe, convenient, accessible, comfortable and attractive cycling infrastructure



Keep up to date with Marshalls
Cycling products on the website
www.marshalls.co.uk/commercial



Marshalls

Creating Better Spaces

Landscape House, Premier Way,
Lowfields Business Park,
Elland HX5 9HT
Tel: 08450 213 223
www.marshalls.co.uk/cycling

Registered Office:
Marshalls plc,
Landscape House, Premier Way,
Lowfields Business Park,
Elland, HX5 9HT