



Infrastructure & Highway Solutions



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Why choose Marshalls Civils & Drainage?

Since the acquisition of CPM in 2017, Marshalls Civils & Drainage is the only manufacturer to offer an end to end integrated water management solution, with products that intercept, infiltrate, attenuate, treat, convey, release and protect from surface, flood, foul and stormwater drainage.

Made primarily in the UK and built on a solid reputation, we design, manufacture and deliver sustainable infrastructure, water management and retaining wall solutions for a safer and better environment.

We work across every sector of the industry, having built established partnerships with clients and collaborators alike, including National Highways, Network Rail and the Environment Agency.

Our solutions include:

- Combined kerb and drainage systems
- Below ground water management and SuDS solutions
- Linear drainage and surface water channel systems
- Offsite solutions and structural precast products
- Redi-Rock™ retaining walls



Sustainable to the core

At Marshalls, our approach to sustainability is based on strong foundations, including our Code of Conduct and The Marshalls Way of doing the right things, for the right reasons, in the right way.

Our sustainability strategy is to Create Better Futures for Everyone: Socially, Environmentally and Economically. Within Civils & Drainage, we look to offer water management and retaining wall products that offer safe and secure solutions for all.

Climate change is undoubtedly one of the biggest challenges facing us all today and as a business, we know that we have a role to play in reducing

carbon emissions. Day to day, our approach includes reducing environmental impacts and taking responsibility within our operations.

This includes changing the lighting systems within our facilities from traditional halogen and strip lightening to LED lighting systems, with motion detectors, that automatically dim or deactivate when no motion is detected. This has resulted in a reduction in energy consumption.

We also recycle water, including rainwater within our production units.



Find out more: marshalls.co.uk/commercial/product-sustainability

Sustainable partnerships & charters

As full members of MPA (Mineral Products Association) Precast we have signed up to their Sustainability Charter. Launched in 2007, it goes beyond legislation in leading the construction industry in sustainability, reducing carbon footprints and adopting responsible sourcing systems.

We're also active members of the Sustainability Supply Chain School and work passionately and diligently to uphold the United Nations Global Compact (UNGC) pillars of human rights, labour, environment and anti-corruption.

Impacting customer sustainability

We look at solutions that favour customers and end-users positively, in terms of sustainability, construction programmes and cost savings. Take for instance the sealed manhole system that saves installers from benching manholes, reducing confined space working. These manholes can be installed within an hour, saving on time and site costs.

Our Design team offer the best surface water solution for highway drainage, in terms of loading classifications, product selection and sustainability.

Sustainable drainage systems

Precast SuDS can be integrated with natural and soft SuDS, or used independently. They offer proven long-term performance that can significantly minimise lifetime costs and flooding, as well as structural and hydraulic performance, and are fully accessible for cleaning and maintenance.

Water management security

Our commitment to sustainable solutions extends to products for surface water, storm water, flood protection, wastewater management and flood prevention, as the working life of many of our precast concrete solutions exceeds that of other drainage materials.

Reducing carbon

We are constantly looking to reduce our carbon footprint, which includes sourcing our raw materials close to our three sites in Halifax, Pollington and Mells, to lessen supply routes and in turn carbon emissions. The energy used throughout our production facilities and offices is generated by **100% renewable energy**, reducing our carbon footprint.

Managing waste

We manage our waste, with most being recycled. Any products that do not pass our strict quality control procedures are recycled back into the manufacturing process where possible. This is all certified to BS EN ISO 14001 Environmental Management Certificate.

Recycled materials

We use crushed and recycled materials in our manufacturing processes and replace cement content in our products. This reduces the need for virgin material and the associated impacts on carbon emissions, and reduces material extraction and the carbon generated by additional processes and vehicle movements.

As specialists in water management solutions, we understand the value of capturing and recycling rainwater, which is used throughout our works, both within the manufacture of products and to reduce cement dust, during the summer months. This decreases our need on precious water resources.

Timber is reused where possible.

Construction, Design & Management (CDM)

Marshalls Civils & Drainage is committed that its products are designed and manufactured to ensure the safety of users. Installation of products involves breaking ground and is thus considered as construction work under the Construction (Design and Management) Regulations 2015.

We put a great deal of effort into ensuring that our designs are safe, and will provide structural details to the Principal Designer nominated by the Construction Site Client.

Our accreditations



Drainage solutions

Discover our precast concrete water management, linear drainage and retaining wall solutions, all manufactured in the UK.

Together with Marshalls' solid reputation for providing high quality, sustainable precast water management products, delivered to every sector of the construction industry, the range itself is fully supported by the expertise of our experienced technical and engineering teams.



Find out more:
marshalls.co.uk/commercial/civils-and-drainage



Beany® Block

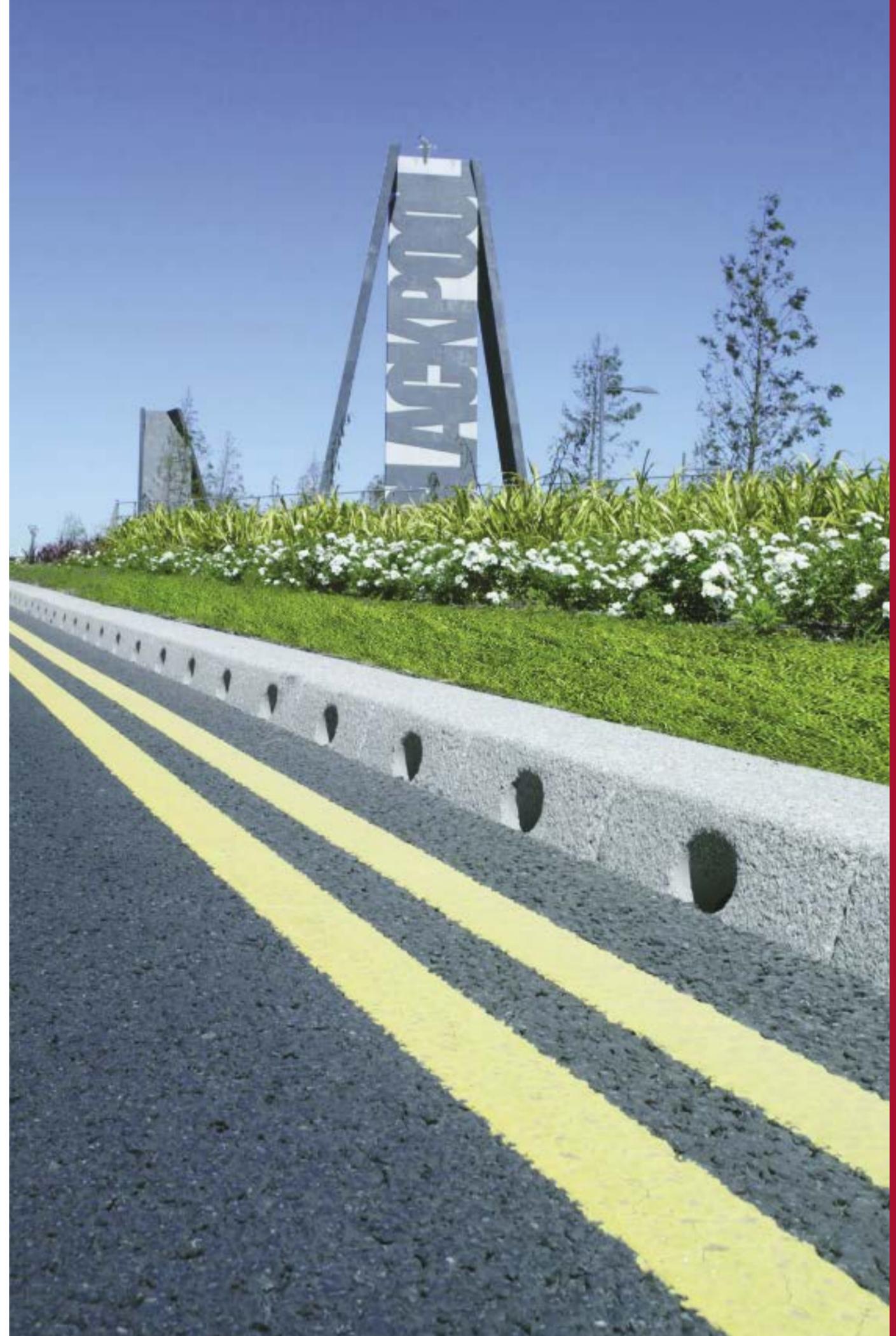
Marshalls Civils & Drainage Beany® Block is a reliable, effective, medium to high capacity drainage solution that's been used by professionals since the 1980s. It has a reputation for solving drainage problems where other systems may fail, or where project restrictions make other solutions impractical.

With over 3 million linear metres installed, the Beany® Block has a proven pedigree across a range of applications. Its durability and lack of remedial work offer peace of mind and lower ongoing costs. Manufactured as a two-piece concrete system and available in a variety of finishes, it has excellent slip skid properties and can be used alongside a range of accessories for optimum flexibility.

Beany® Block combines the largest hydraulic capacity with a loading classification up to E600. Robust concrete construction enables it to withstand installation damage and its simplicity makes it highly cost-effective and versatile.

Features

- Available in standard or textured finishes
- Loading capacity of E600
- Medium to high capacity road and kerb drainage solution
- Available with Conservation colour option



Mini Beany®

Evolved from the successful Beany® range, the Marshalls Civils & Drainage Mini Beany® combined kerb and drainage system is a medium capacity water management solution.

Excellent flow rates alongside a robust concrete construction make the Mini Beany® the ideal choice for low to medium capacity road drainage requirements and areas with heavy or abnormally heavy wheel loads.

The two-piece design of the Mini Beany® - made up of the Mini Beany® top unit and a base channel, reduces the risk of damage during the installation process. It also allows for a choice of top finishes to complement a wide range of aesthetics, from urban to rural. Choose from two colour options - Standard Grey and Conservation Silver Grey.

Features

- Innovative two-piece design
- Available in two colour options to suit your requirements, including conservation silver grey
- Available in granite
- Low to medium capacity road drainage and kerb drainage solution
- Loading capacity of E600



Mono Beany®

Manufactured as a single piece and with a loading classification of D400, it is a solution for use for all road-going vehicles across a variety of applications. Suitable for use with a range of accessories, Mono Beany® provides a comprehensive and highly effective drainage system which carries the BSI Kitemark.

With an innovative design that combines strength and durability with aesthetics, Mono Beany® provides a practical and long-lasting solution to kerb drainage that's known throughout the industry.

Its construction combines high-strength M-Tech concrete, cast around a 100% recycled polyethylene core, which provides superior hydraulic flow rates.

The Marshalls Mono Beany® is available in two depths and in both Half Battered and 45° Splayed profiles.

Features

- Available in two depths in both half battered and 45° splayed profiles
- D400 loading classification
- Available with a range of accessories for ease of use
- Available with a granite finish
- Manufactured from high-strength M-Tech concrete with a recycled PE core



Bridge Beany®

If you want to ensure that you are installing a surface water solution that has the lowest cost over its lifetime, is environmentally sustainable, meets your loading requirements and provides a trouble-free drainage solution, make sure it's a Type I system – our Bridge Beany is.

With proven durability, strength and impact resistance, our ductile iron Bridge Beany® is a proud member of the award-winning Marshalls Beany® range.

Offering a tailored, value-engineered combined kerb and drainage solution that can be used as a standalone product or in conjunction with other products in our Beany® range, the Bridge Beany® is a

great surface water management solution, that helps keep our roads and highways safe from surface water flooding.

Made in the UK, allowing for shorter supply and delivery routes, the Bridge Beany® is a real sustainability winner, when compared to other products, as its produced using 80% of recycled materials and can be repeatedly cleaned and re-laid. 100% reclaimable, time and time again, the Bridge Beany® is a real winner in terms of sustainability.

Features

- Type I system (no haunching)
- Fully compatible with other CKD solutions in the Marshalls range
- One-piece cast iron unit
- Manufactured using 80% recycled materials
- D400 and E600 loading classifications available



Traffic Drain

Traffic Drain provides a comprehensive solution to your project's drainage needs, offering unique design elements, ease of installation and low maintenance costs.

Designed to complement the Mini Beany® range, the Traffic Drain connects the flow between kerb and slot units and is fully compatible with Mini Beany junctions, outfalls and other ancillary units.

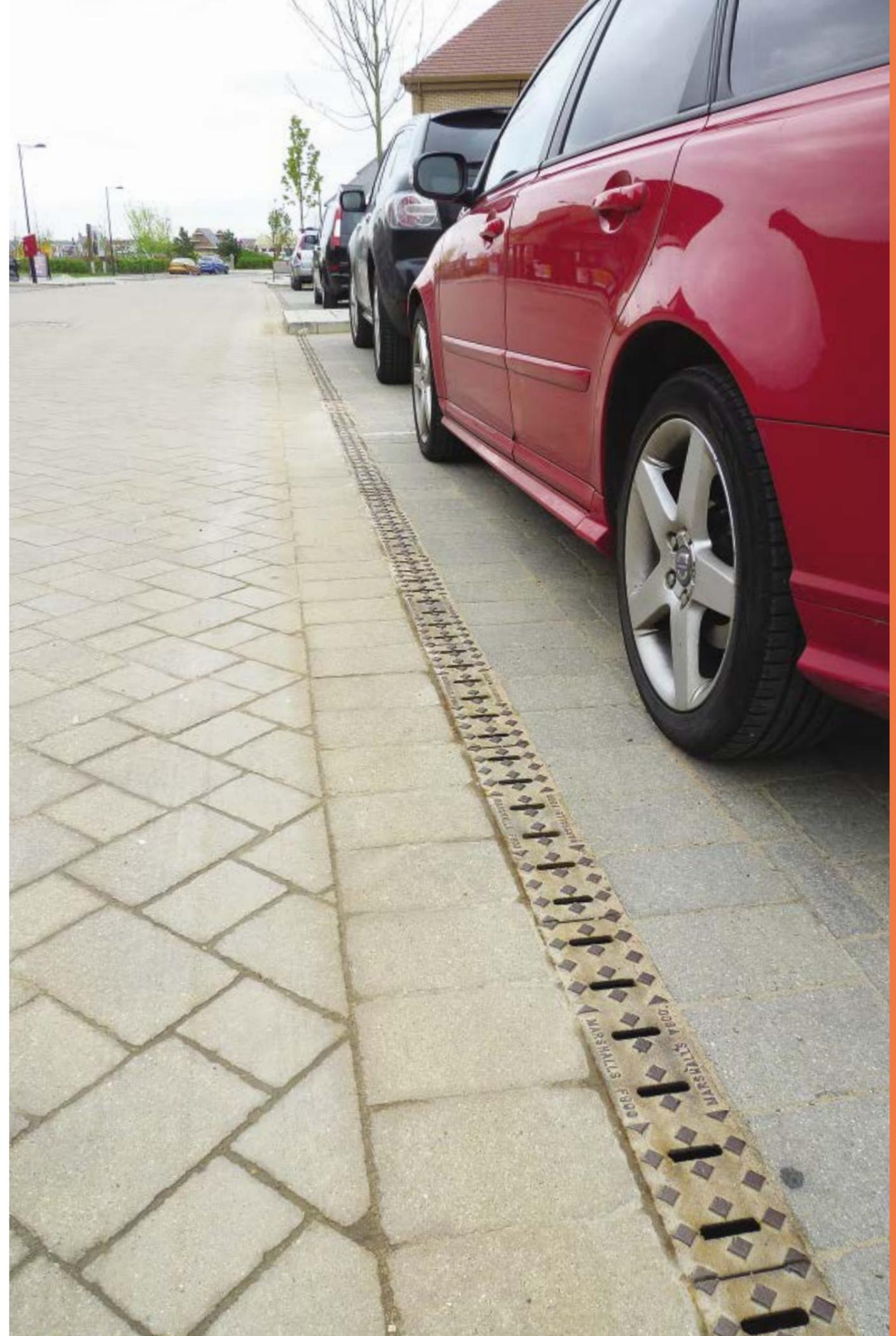
Providing medium-capacity drainage, Traffic Drain combines a robust concrete channel with high-strength cast iron grates, which allow it to take

loadings up to F900. Its ability to withstand fast-moving vehicles and bear heavy loads makes it ideal for high volume highway applications.

Manufactured as a simple two-piece design, Traffic Drain is strong enough to withstand any damage during transit and installation.

Features

- Robust precast concrete
- Requires little maintenance
- Suitable for loadings up to F900
- Compatible with the Mini Beany® range



Max-E Channel

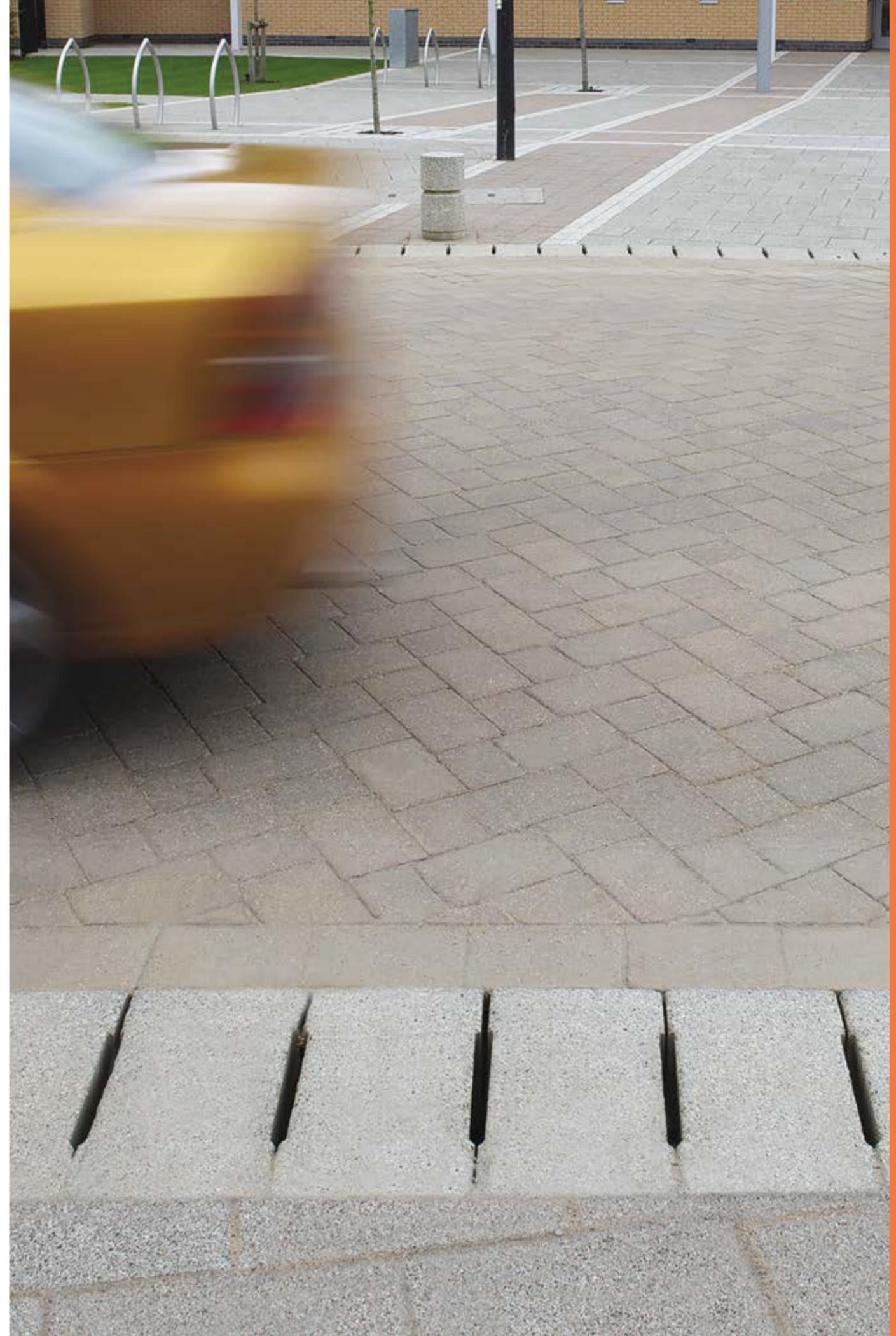
Marshalls Max-E Channel range is a high capacity linear drainage system that complements the Beany® range to ensure continuity between kerb and top units. Max-E integrates with the Beany® Block top units creating a unique system capable of providing continuous drainage of the carriageway at road and vehicular crossings.

With the appropriate top options, Max-E Channel can achieve a load bearing classification of F900, the highest possible rating, making it a perfect option for rail, commercial and industrial deployment.

Max-E Channel is available in a range of top units that will complement any aesthetic, regardless of the project. Concrete slotted top units are offered in Conservation Silver Grey, Standard Grey and Reinforced Standard Grey. The blocks can be textured to provide an appealing finish. Alternatively, cast-iron options can be deployed.

Features

- Compatible with all Beany® products
- Can withstand loads up to the highest loading classification - F900
- Suitable for commercial, industrial or rail applications
- Available in concrete slotted top and cast-iron top finishes



Box Culverts

Box culverts are available in square or rectangular units and can be used as single or multi-unit runs, giving excellent mechanical and hydraulic performance and are suitable for a variety of applications such as highways, storm and foul sewers, tunnels and subways, underpasses, stream crossings, attenuation and storage tanks.

Made in the UK, the precast concrete box culverts are designed and manufactured in accordance with EN 14844.

The culvert is available with end walls, access points, inlets, outlets, splayed ends, starter bars can be added to facilitate any additional casting on site which may be required as part of the finished work.

Find out how our box culverts were successfully installed in Saltburn by visiting www.marshalls.co.uk/commercial/case-studies/pheasant-field-lane

Features

- Minimal maintenance and a 120-year design life
- Quick and easy installation as delivered to site ready to install
- Get optimum flow rates with the culverts' smooth finish, allowing water to flow through seamlessly



Catchpits

Using modern methods of construction Marshalls precast catchpits and silt trap manholes are available as a one-piece chamber unit, saving on site installation time and giving more health and safety benefits to those on site.

Why spend days constructing an in-situ catchpit or silt trap when our offsite chamber is available?

The reinforced watertight one-piece chamber structures offer greater design flexibility with a range of cored or pre-formed holes/cut-outs for inlet/outlet holes which come complete with seals. The units can also accommodate uPVC, twinwall, clay, ductile iron and concrete pipe connections.

Features

- Reduced costs in construction time and on-site personnel
- Sump depths to suit design requirements
- Increased Health and Safety benefits as it reduces on-site construction
- Eliminates extra transport and material wastage used with on-site construction methods
- 1050mm unit weighs less than one tonne
- Bespoke design to suit customer requirements, with reduced installation times



Design options

- 1050mm to 1800mm standard tongue and groove complete with a cast-in base
- 1200mm, 1500mm and 1800mm sealed manhole joint complete with cast-in base
- Pipe inlet/outlet diameters covered by system 100mm to 900mm



Sealed Manhole

After an extensive research programme, Marshalls were the first to introduce the 1200mm Sealed Manhole system to the UK in 2009 to meet the challenges of modern-day construction. Since then, it has gone from strength to strength.

Available in 1200, 1500 and 1800mm, the Sealed Manhole comprises of a monolithic precast concrete base (available pre-benched in any configuration), a sealed chamber ring (with a thicker wall than a standard ring), a rubber joint (so no tokstrip of similar product is required) and a sealed cover slab which is supplied with your required access.

The system can be installed in as little as 30 minutes with reduced need to work in confined space, making safe site practice a real winner. It eliminates the need for wet trades resulting in rapid construction compared to traditional methods as well as a reduction in the time the excavation is open.

Features

- Complies with BSEN 1917:2002 and BS5911-3 and accepted for use by all major UK companies
- Less requirement to work in confined spaces, and no requirement to form a concrete surround with reduced time needed for open excavation
- Up to 40% savings on GHG emissions compared with traditional build
- Modular solution for fast installation
- Can be manufactured according to the specifier and client where possible
- Watertight
- Optimised flow characteristics by customised base configuration of all inlets and precise drop in channels and pipe connections
- 120-year design life minimum
- Variety of design options available



Flow Control Chambers

With UK flooding events on the increase, Marshalls offer a storm attenuation management flow control precast concrete manhole, for stormwater events at different peak levels, such as 1 in 20, 1 in 30 and 1 in 50-year storm events.

In an innovative joint venture with Hydro International, this bespoke range of Hydro-Brake Chambers with long-term flow control solutions are

both quick and easy to install and are offered with a range of pre-fitted flow control components from 1200mm up to 3000mm chamber sections.

They are suitable for most infrastructure, residential and commercial applications.

Features

- Catered to individual and applicational requirements through bespoke chamber options with various flow control components available
- Take control of discharge flow rate with this offsite solution that accommodates different peak levels
- No need for on-site fabrication this solution is developed offsite and supplied ready to install
- Remove risk associated with construction skills shortage, these flow control chambers have a reduced need for skilled labour
- Feel reassured with this long-term, sustainable solution



Hydro-Brake Optimum® Chamber

The Hydro-Brake Optimum® chamber comprises of a precast concrete chamber base containing a bespoke Hydro-Break Optimum® Flow Control, which is delivered to site ready for immediate installation, saving on on-site installation time and cost.

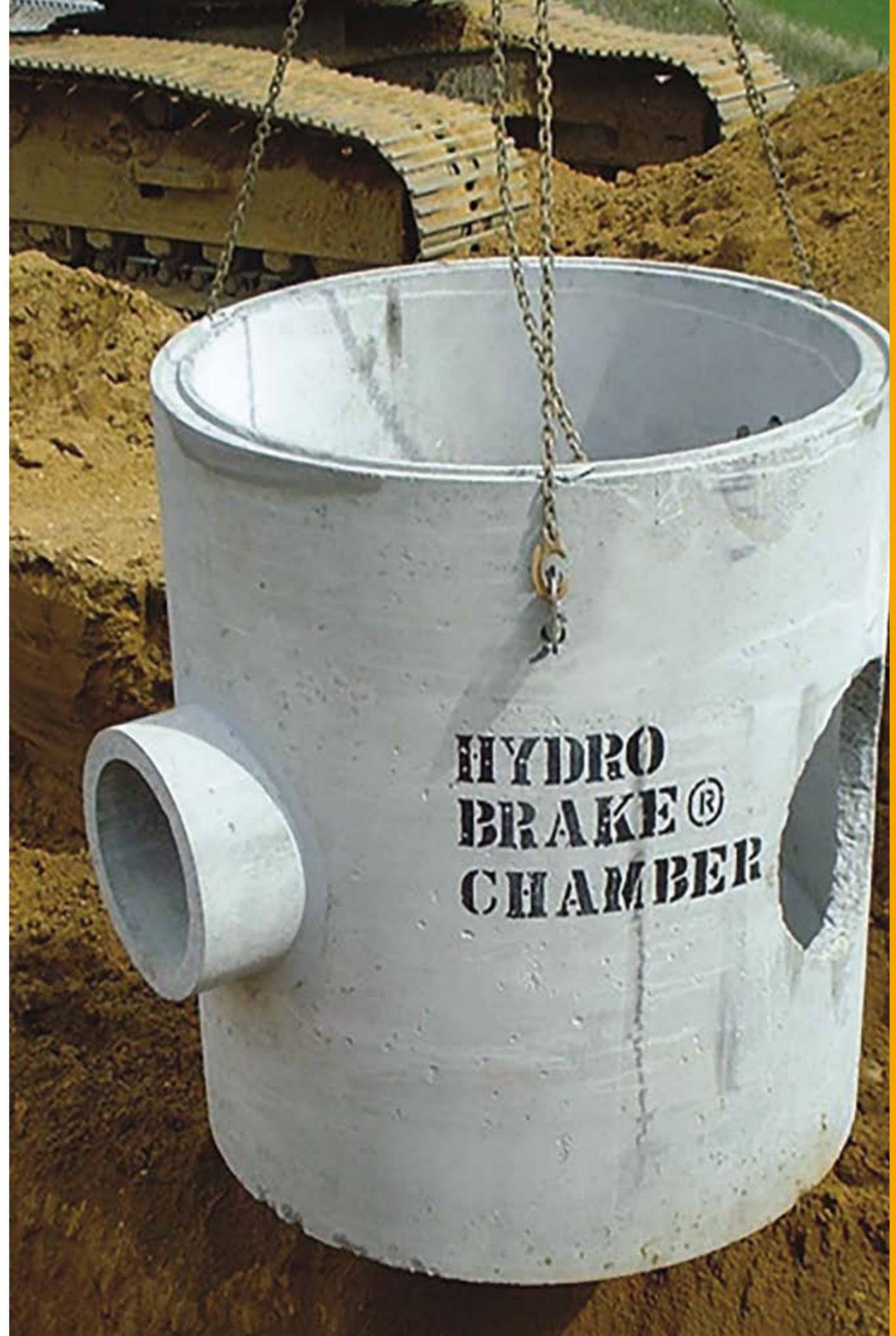
As the Hydro-Brake Optimum® Flow Control is already installed in the chamber complete with preformed benching (preformed benching with standard units only), installation is cut to a fraction of the time compared to conventional methods. Inlet hole(s) are cored or formed prior to delivery and are

made to suit exact site requirements and a range of outlet pipe sizes are also available to suit site requirements.

The Hydro-Brake Optimum® has been independently certified by with the BBA and WRc giving engineers and adopting bodies' confidence in both the performance and characteristics of the device along with the durability/longevity of the product itself.

Features

- Unique tailoring of the full response characteristics of the devices to give the very best vortex-based solution to any flow control requirement
- Offers up to 15% reduction in upstream storage, significantly reducing capital expense
- Outlets (clearances) up to 20% larger, minimising the risk of blockage and maintenance costs
- Design and performance independently accredited by BBA and WRc
- Option to include adjustable intake to allow for up to 20% adjustment of the flow, future proofing in case of site modification or climate changes
- A range of time saving installation options to simplify construction



Downstream Defender® Select

Customise the capture and retention of sediment, oils and floatables from stormwater runoff over a wide range of flows in a small footprint.

The Downstream Defender® Select is the new generation of hydrodynamic vortex separator for treatment of stormwater runoff to protect the environment and meet water quality requirements. Engineers can customise the performance of the unit to meet specific stormwater quality objectives

through model selection and other additional options. An extended range of chamber sizes allows engineers to tailor their drainage designs to meet specific pollutant removal standards.

The Downstream Defender® Select also offers easier installation with much more flexibility of pipe sizes and connections and can accept up to three inlets.

Targeted pollutants

- Fine particles
- Gross pollutants
- Liquid and sediment bound hydrocarbons
- Sediment bound heavy metals
- Sediment bound nutrients



Weir Wall Chambers

In most cases, a weir wall chamber separates silt and oil and prevents it from continuing into the drainage system, improving the quality of the water before progressing into the water management system.

The chamber is designed to accommodate a weir wall that can be pre-fitted with a Hydro-Brake Optimum™, Hydro-Brake®, Penstock, Non-Return Flap Valve, Orifice plate, or a combination. The precast concrete chamber can be designed to suit most connecting pipe sizes and at the optimum chamber depth to create maximum benefit to the stormwater system.

The design usually includes a twin access heavy duty precast concrete cover slab and an additional hole can also be provided for the penstock spindle should it be required. Sectional weir wall chamber systems are available in 2100mm, 2400mm, 2700mm, or 3000mm lengths.

Features

- Weir wall chambers require little space making them excellent for space saving
- Lower construction costs as they are built off-site
- Quick and easy to install using regular chamber joint
- Bespoke option, designed individual site requirements
- Offsite solution so no need for on-site fabrication
- Made offsite using modern methods of construction within a Marshalls factory resulting in a high-quality finish



Direct Access Pipe System

The Marshalls Direct Access Pipe System (DAPS) is the use of our sealed pipe systems connected together to create a secure solution for the attenuation of water system.

The bespoke offsite solution allows for the layout of the system to be adjusted to suit the volume of water that needs to be stored by adding additional pipework or by using a larger diameter of pipe.

The layout of DAPS can also be adjusted to suit the available space on site by interconnecting the pipe runs, which also allows for the flooding of the tank to be simultaneous through all pipe runs as the water enters. The bespoke DAPS pipe entries can be pre-cored or pre-sealed for push-fit connection and end entry units have saddles precast, so chamber rings can be used to meet the required surface levels, with unit having the option to have ladders pre-fitted.

To make the installers life easier, we have designed end entry options for ease of access

and maintenance, with the DAP system allowing for any variance in surface levels and the height of the access manhole easily adjusted with standard chamber rings and cover slabs. Offering material choice and availability for designers, contractors and installers, our precast DAP system can be used to replace plastic attenuation crates, plastic twin wall pipe and galvanised steel corrugated pipe and requires no special aggregates to be shipped into site to facilitate installation and can be backfilled with the excavated earth at site.

The DAP system does not require membrane wrapping as required on attenuation crate installation and the connection to the DAP system is simple with either new or existing pipework via the pre-cored entry points and can be viewed as an extension to the drainage system. A minimum cover level of 600mm at the pipe collar is all that is required for D400 loading which can reduce costs on excavation at site and save on installation times.

Features

- Established and proven product range that is a quality assured and kitemarked
- Inherent structural strength of concrete with an 120 year design life
- Systems can be designed to suit most structural and hydraulic specification including installation under roads
- Long-term easy access into the system for maintenance
- Watertight joints to both pipes and manholes, including load bearing seals
- Can be installed by the roadside or in areas where space is limited





End entry manholes

An end entry manhole is used at the end of either an in-line or off-line tank. It consists of a standard pipe, with a reinforced end wall, a saddle slab, prefitted onto the barrel, complete with an access hole to suit and a 1200mm sealed manhole joint.

Side entry manholes

Side entry manholes are normally used to gain mid run access entry into in-line or off-line tanks and consists of a standard concrete pipe complete with access shaft. Depending upon the overall depth, a sealed manhole cover slab or reducing slab to a 1200mm sealed manhole complete with a load bearing seal can be supplied. 1200mm rings are used to make up the desired shaft height and double steps or ladders can be fitted into the unit.

Side entry manholes can be supplied with a separate bend to provide a change of direction and access can be to either side of the pipe. Side entry manholes are classified as a junction within the scope of BS EN 1916:2002.

Mid entry manholes

Mid entry manholes are usually used for mid run access into either in-line or off-line tanks and consist of a standard pipe with a saddle slab and cored access hole. The saddle slab has a joint for a 1200mm sealed manhole to fit onto and can be further reduced to restrict access for cameras only.

Available from 1350mm and above, the system is designed for access only with a winch or via a removable ladder into the main tank and can be supplied with a separate bend to provide a change of direction should you wish. Contact us to discuss smaller diameter requirements. Mid entry manholes are classified as a junction/bend within the scope of BS EN 1916.

Side and mid entry manholes complete with bend

A side or mid entry manhole complete with bend is an economic method for access to a tank system, eliminating the requirement for a traditional manhole and is usually used for mid access into an in-line run requiring a change of direction, it consists of a side or mid entry manhole that incorporates a bend in the barrel of the pipe.

Available on 900mm to 1800mm pipe sizes, depending upon the bend angle and manhole type, sealed manhole shafts can be used to make up the desired height with double steps or ladders being fitted to permit access. A side and mid entry manhole complete with bend is classified as a junction/bend within the scope of BS EN 1916.

Clockwise from top-left: Stop end bend; side entry manhole in ground; stop end pipe installation; side and mid entry manhole complete with bend; mid entry manhole; end entry manholes

Stop end bends

Stop end bends consist of a 90° bend used in an upright position as an access into the pipeline and are mainly used at the downstream end depending upon the overall depth required, 1200mm manhole shaft can be used to make-up the desired height, with double steps or ladders being incorporated into the unit to permit access.

Inlet and outlet connections can be cored or formed to suit drainage requirements. Stop end bends are available from 1200mm diameter and above, although smaller diameters can be manufactured upon request. Stop end bends are classified as a bend within the scope of BS EN 1916:2002.

Stop end pipes

A stop end pipe is normally used at the end of an off-line tank and does not include access points.

They can be manufactured with an inlet and outlet hole at any position with any diameter hole size complete with a seal. The 200mm thick reinforced concrete end wall has a dowelled connection complete with a Hydrotite seal, to achieve a waterproof connection.

Stop end manholes are available across the Marshalls Civils & Drainage standard length pipe range.

Integrated pipe flow control chambers

Our integrated pipe flow control chambers have been designed to keep the flow control chamber the same internal diameter as the pipe. This system is commonly used for in-line attenuation schemes in sizes ranging from 1200mm to 1800mm.

Headwalls

Marshall's precast concrete solution headwall system is designed to connect pipe work discharging into open water courses, that offers a cost-effective alternative to in-situ structures, as well as outlet points from ponds and swales.

Precast headwalls drainage controls erosion and scour resulting from excessive velocities and turbulence and help prevent adjacent soil from sloughing into the watercourse.

Concrete headwalls can be pre-fitted with Hydro-Brakes®, Penstocks and Non-return Flap Valves depending upon application, please ask us about our time saving solutions for your headwall requirements.

As with all concrete products, the headwalls will weather and natural coverage helps them blend into their environment.

Features

- Erosion control options suited to your requirements
- Greatly reduced installation time and cost - no on-site shuttering or formwork required
- Low maintenance, secure solution



Flat Pack Systems

Marshall's Civils & Drainage produce a bespoke range of flat pack systems that can be used in situations where conventional circular chambers are not appropriate and can be supplied with pre-installed holes or be pre-fitted with pipe equipment to suit.

Offering lower construction costs, faster installation and a design life of 100 years, bespoke flat pack chambers are suitable for attenuation tanks, large

CSOs, pumping stations and water storage tanks. These systems are self-standing when assembled, with loading capabilities to suit all Eurocodes or BS EN standards C250, D400, E600 and F900.

The base slab is seated onto a compacted Type I or similar base. Cover slabs are manufactured to suit each system with access openings.

Features

- Flexible solution with health and safety benefits to those on-site, including the lower need for confined space working
- No concrete surround needed, saving on both time and installation costs
- Reduction in waste disposal costs, long-term maintenance costs and traffic movements
- Chambers can be manufactured to suit most dimensional requirements and the system comes with pre-fitted watertight wall seals for jointing
- Manufactured offsite under factory conditions, using modern methods of construction
- Made to site requirements



Special Cover Slabs

As the demand for high loading and multi-access precast concrete cover slabs has risen, Marshalls Civils & Drainage have become experts at both design and manufacture, bringing together the expertise of both the Technical and Design teams and those in production.

Extra-large heavy duty concrete slabs have been manufactured for airports and seaports as well as those designed to comply with the National Highways Specifications and special cover slabs to customers' own reinforcement design.

Cover slabs can either be a one-piece heavy-duty cover slab or a segmental unit depending on the diameter. Our qualified engineers are on hand to give advice with design and installation.

Typical examples of special cover slabs supplied include cover slabs for pumping stations which incorporate davits, rebates and surface boxes, extra heavy-duty slabs for airports and ports, cover slabs with multiple or extra-large accesses or slabs designed to comply with National Highways Specifications or customer's own reinforcement design.

Features

- Manufactured offsite using modern methods of construction so they are delivered to site ready to install
- Ease of installation with full construction details available



Typical examples

- Pumping stations, incorporating davits and/or rebates
- Extra heavy duty slabs for airports and ports
- Extra large accesses
- Slabs designed to comply with Highways Agency specifications
- Multiple accesses
- Non-circular slabs
- Slabs with customers own reinforcement design



ESS Bases

Offering a safe and secure base for Electronic Signalling Systems (ESS), Marshalls heavy-duty ESS bases are fast to install, helping to speed the conversion of highways into smart motorways.

Made to order to suit your specification and available with or without a bitumen coating, these bases make the most of modern methods of construction as they are delivered ready to install on site (with pre-fitted base plates).

With proven high installation rates, the ESS bases save time and money and offer more convenient way of installation as well as complying with both HA and industry standards.

The Marshalls reinforced one-piece base offers great design flexibility.

Features

- Available to customers requirements
- Compliance with HA and standard industry foundation requirements
- Can be delivered throughout the UK mainland
- Full design service offered
- Aftersales and onsite service available



Retaining wall solutions

The Marshalls Civils & Drainage BBA approved Redi-Rock™ modular wall system is an ingenious, space saving solution for the retention of earth for a wide range of retaining, force protection, landscaping and flood protection applications.

With a modular design, our retaining wall systems stand the test of time, offering protection, security and ultimately, peace of mind.

We are the only manufacturer of Redi-Rock™ modular walling in the United Kingdom mainland as licensed by Redi-Rock™ International.



Find out more:
marshalls.co.uk/commercial/civils-and-drainage



Redi-Rock™ Walling Solution

Often referred to as one-tonne Lego®, Redi-Rock™ blocks are big enough that they can be simply stacked on top of each other to construct a gravity wall. Redi-Rock™ modular walling precast products are made from durable, wet-cast concrete. For even taller and/or more heavily loaded retaining walls, the Redi-Rock™ Positive Connection (PC) system can be used to construct a mechanically stabilised earth (MSE) wall. However, Redi-Rock™ is much more than simply large retaining wall blocks. Redi-Rock™ freestanding blocks have the same great look as the retaining blocks, with texture on two or more sides.

These freestanding blocks are perfect for perimeter walls, entrance monuments, or parapet walls. Redi-Rock™ accessory products include column blocks, steps, benches and capping blocks/coping stones, and are perfect for completing your project.

Features

- Available in three different finishes
- All product is supplied without colour unless specifically ordered
- Combines solid engineering and aesthetics
- British Kitemarked
- UKCA marked
- BBA approved

Design

Cobblestone

A chiselled Cobblestone texture mimics the appearance of six small blocks, giving the wall a more uniformed look

Limestone

With a quarried face looking great on large scale projects, the textured blocks offer walls an impressive finished appearance

Ledgestone

Offering deep, random textured walls, which blend in beautifully with natural stone, giving the impression of a random stone wall

Top block

Grooved underside, dished top to accept surfacing



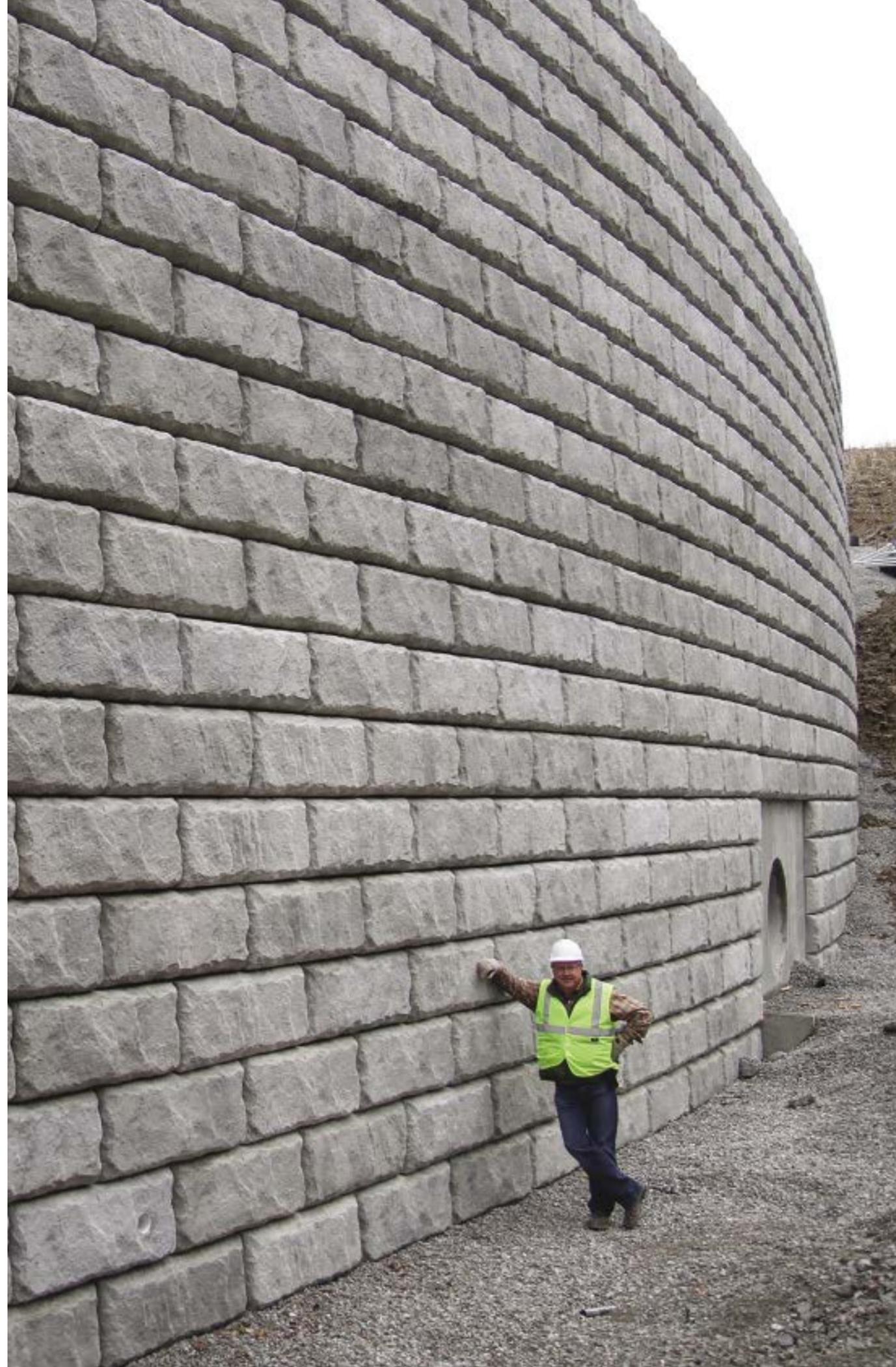
Middle block

Grooved underside, domed top to accept next course



Bottom block

Flat underside, domed top to accept next course



Redi-Rock™ Flood Protection

With an increase in storms and flood damage Marshalls Civils & Drainage offers a range of flexible low cost, high quality flood protection solutions based on their innovative Redi-Rock™ interlocking modular wall system.

Whether looking to heighten river banks, build new sea walls or construct flood plain defences, Redi-Rock™ offers considerable benefits over alternative

solutions, not least the aesthetically pleasing finish that Redi-Rock™ offers enabling it to blend perfectly into the local environment.

Redi-Rock™ Waterways, Shoreline Defence & Erosion Control

As past summers have shown, at least ten per cent of all land in England lies within areas at risk of flooding. There are tens of thousands of buildings at risk including the Houses of Parliament. Predictions for the next 50 years estimate that water levels in England will rise by around 0.3 meters.

To help answer this national challenge, Redi-Rock™ provides flexible solutions that offer savings in economy and time-scale when compared to traditional methods.

Waterways

Canals and rivers can utilise Redi-Rock™ blocks. Tow paths and river banks can be reinforced with a Redi-Rock™ walling solution that aesthetically compliments the environment. Redi-Rock™ is a quick to install and economically attractive solution that has the added advantage of being very aesthetically pleasing in the country environment.

Flood Plain Defences

Redi-Rock™ is ideal for flood plain defences since as the seas rise so will the rivers and low-lying land will flood unless protected. Redi-Rock™ concrete blocks are ideal for this type of flood defence. In the UK, the Environment Agency has specified Redi-Rock™ for many schemes used to protect both commercial and private properties.



Redi-Rock™ Reinforced Walling

Redi-Rock™ reinforced walling or positive connection system (PC) is used in conjunction with a geogrid and has been rigorous tested to be used when either an increased load or height is required. Due to the massive size of each block, using the system can reduce time and money spent on installation.

The Redi-Rock™ modular reinforced walling can improve the overall aesthetic look of a project with a variety of standard face textures and colour options, and delivers an attractive, cost effective, high performance retaining wall structure.

This Redi-Rock™ system combines the massive stability with the natural appearance of stone with the established performance of geogrid reinforcement through a simple and highly efficient positive connection with the Redi-Rock™ reinforced block.

This result is a superior retaining wall system developed to meet the most demanding structural needs of highways, harbours, flood defence, bridge abutments, rail projects, embankments, airports and as well as industrial and commercial projects.

Features

- Enables simplified wall construction
- Increased wall height achieved with reduced geosynthetic reinforcement requirements
- Can use in conjunction with freestanding walls to create



Redi-Rock™ Retaining Walls

Our natural stone looking retaining wall blocks are versatile enough to achieve height without compromising on strength, Marshalls' can work with you in assisting with an engineered solution to meet your project requirements, from planning to installation.

National Highways approved for "Areas of Relative Safety" (ERAs).

Redi-Rock™ concrete retaining wall series offers low project costs and a high-quality solution. The one tonne interlocking concrete blocks are moulded from

solid concrete and delivered ready to build and as they are dry laid, they are fast to install and offer cost savings. Marshalls can offer extensive engineering, design and installation support.

Gravity retaining walling can improve the overall aesthetic look of your project and delivers an attractive, cost effective, high performance gravity wall structure.

Features

- Fast and easy to install
- Space saving designs with geogrid rarely needed meaning walls take up less space
- Aesthetically pleasing, with the look of natural stone
- Minimal maintenance required
- Engineered strength, achieving height without geogrid
- Risk reduced as number of people and time on site is reduced



Beyond infrastructure drainage, we offer a range of other solutions

As a complete external landscaping products business, we cover all manner of outdoor space designs and functions.

Beyond drainage, here are the other hard landscaping, infrastructure and paving solutions we supply:

Landscape Protection & Street Furniture

We supply both protective and non-protective street furniture solutions which blend seamlessly into urban landscape design.

Bricks & Masonry

We offer a variety of manufactured concrete products for the construction industry that come in multiple finishes and colours to suit all building and aesthetic requirements.

Paving

Concrete paving technology has come a long way from standard sizes and colours. Marshalls has decades of experience producing a wide range of styles and finishes that are not only robust and durable, but also vary in styles and designs that deliver long lasting quality.

Mortars & Screeds

We provide ready-to-use mortar, screed and flow screed delivered from a network of wholly owned manufacturing locations located across the UK.

Aggregates

From a network of wholly owned and trusted British quarries, we offer a choice of products from general purpose building sand to aggregates for groundworks or pipe bedding.



Creating Better Spaces

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