



Water Management

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Birco 100, Manchester



Birco 100, Manchester



Mono Slot Drain, Celtic Park



Beany Block, Newcastle



Beany Block, Newcastle



Pave Drain, Holburn



Birco Lite, London Bridge Station



Mini Beany, Bedford



Mini Beany, Ely



Max-E Channel, Bedford



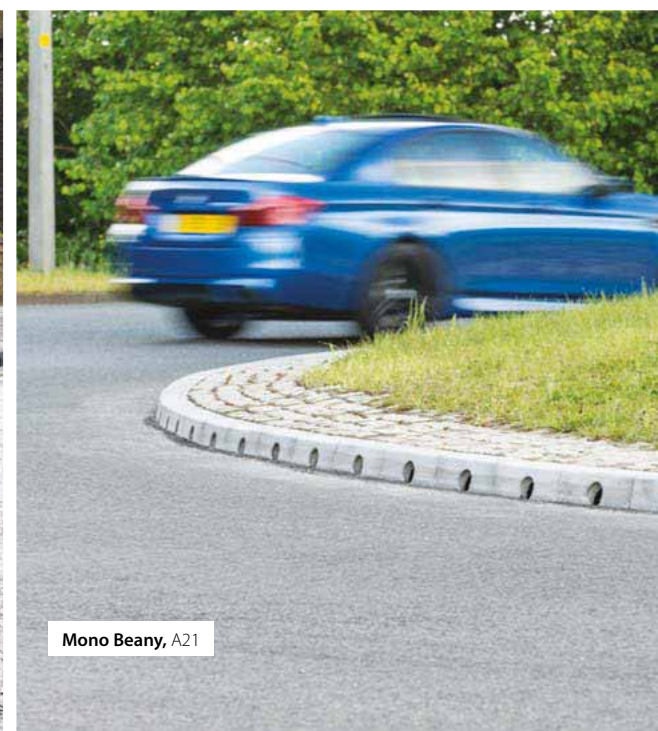
Duo Slot Drain, Manchester



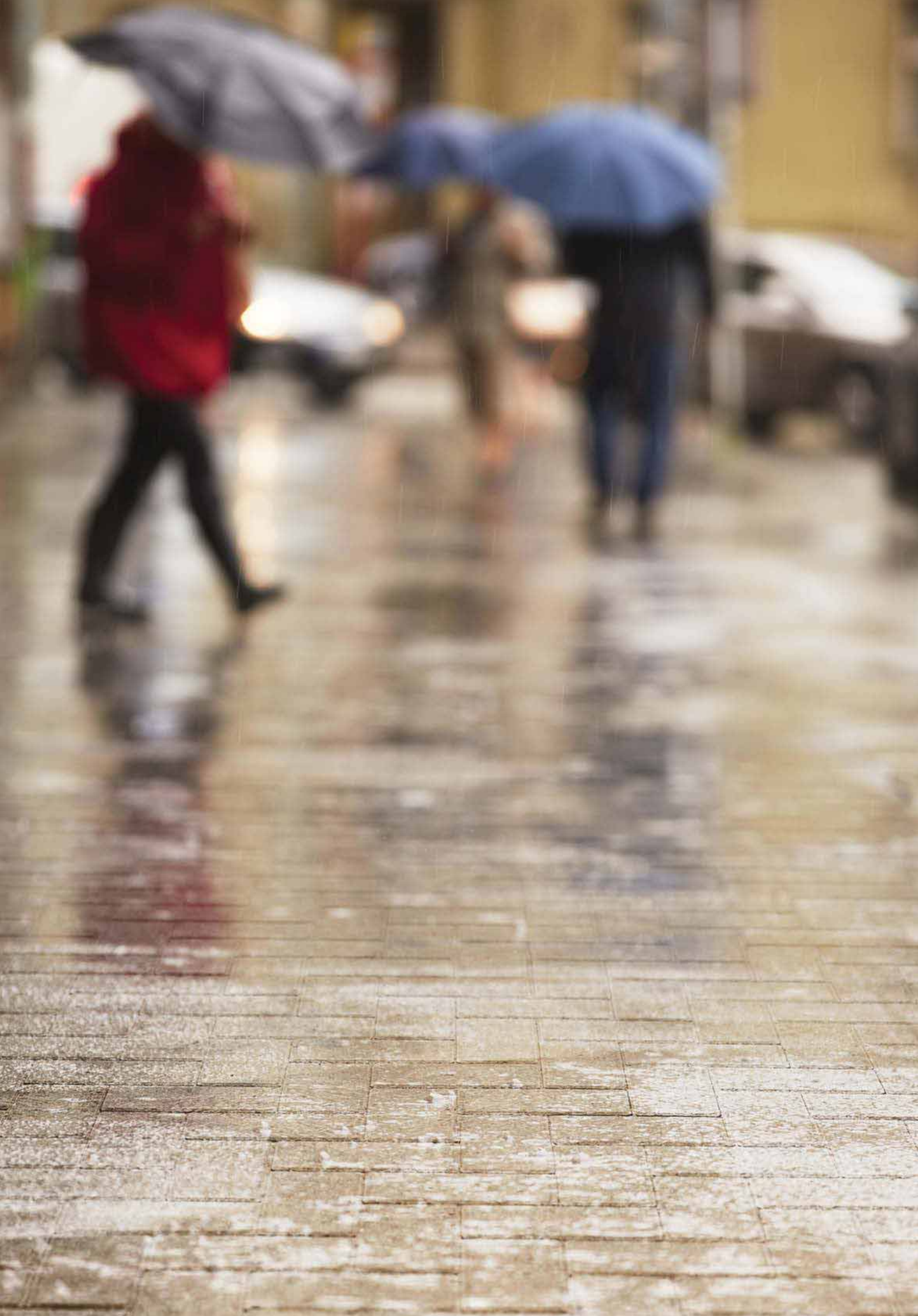
Birco 100, Ely



Mini Beany, Bedford



Mono Beany, A21



The need to protect green, open spaces in which we can relax and enjoy our leisure time must co-exist alongside the hard landscaped areas that urban living demands. Drainage and the management of water has a fundamental role in facilitating that balance.

Everyone involved in creating our built environment bears some responsibility in implementing water management strategies to meet changing climatic conditions and Marshalls fully supports DEFRA's vision for water policy and management where, by 2030 at the latest, we can sustainably manage risks from flooding.

Marshalls are uniquely equipped to provide all the high performance drainage products and know how needed to create effective, yet sustainable water management plans.

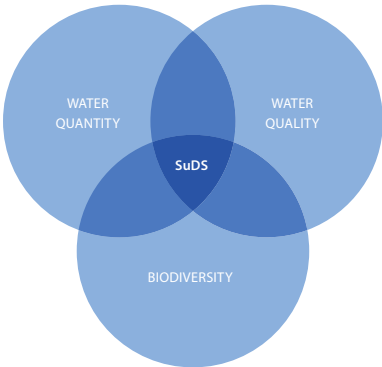
Modern well-planned drainage infrastructure helps to manage water run-off by integrating both linear drainage and permeable drainage systems. Each system has products designed to deliver effective water management for both prevailing and predicted conditions. However, used together they provide a formidable arsenal of water management tools to solve the most complex drainage design problems in the most efficient way.



These sustainable urban drainage systems (SuDS) are designed to consider water quantity, water quality and the effects on biodiversity of the communities affected.

Oversight of such schemes is by Local Authorities SuDs Advisory Boards but all stakeholders from specifiers to contractors and even homeowners need to understand the implications of surface water, its risks and solutions.

The following section covers Linear Drainage which is an increasingly important component of modern drainage design



Water Management

For information or advice on designing, specifying or installing Marshalls water management products (linear, permeable or a combined solution). Email Marshalls expert team at info@marshalls.co.uk

The Case for Linear Drainage

Linear drainage solutions are the preferred choice amongst specifiers and contractors as they are simple and straight forward to design and cost effective to install. Marshalls unique channel drainage systems combine the clear-cut advantages of linear drainage over point drainage with the benefits of high quality, robust concrete.

Significant Cost Savings by Reducing Carrier Pipes

- Many schemes can utilise the inherent ability of a channel or combined kerb and drainage system to act not just as the traditional gully in point drainage, but also as the carrier pipe in storing and transporting surface water.
- Any carrier pipes will be at a shallower depth with resultant cost savings
- Fewer expensive manholes required
- Less spoil to be removed from site
- Improved health and safety on site through reduced need for deep excavation work

Shallow Depth of Construction

- Inherently shallow construction required
- Savings due to reduced excavation
- Reduces construction time, offering further savings
- Less conflict with existing underground services
- Reduced quantities of spoil to be disposed of

End User Comfort

- Eliminates false falls and consequent 'roller coaster' effect for vehicular traffic associated with point drainage
- Level surface offers greater comfort to pedestrians

Surface water interception

- More efficient at intercepting running water
- Ponding is reduced or eliminated

Ease of design

- Shallow depth construction means less conflict with underground services
- Limited number of components required
- Simple and straightforward to design, do not require complex crossfalls
- Channel systems can act as both a gully in point drainage and a carrier pipe to store and transport water

Ease of installation

- Channel line and level can be set out with ease
- Shallow construction means reduced excavation, saving installation time and cost
- Inherently strong and robust precast concrete reduces on site damage
- Fewer expensive manholes required

Reduced maintenance

- Easy access through removable grates or regular access points
- Inherently strong and robust precast concrete reduces on site damage

Aesthetics

- Wide choice of metal gratings, galvanised steel slot tops or textured and colored concrete to enhance any scheme

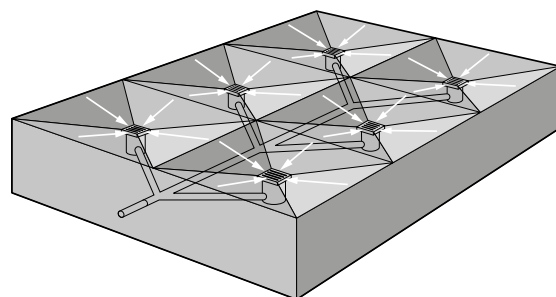


Fig. 1 Typical point drainage system, illustrating the need for complex crossfalls with attendant implications for design, installation and cost

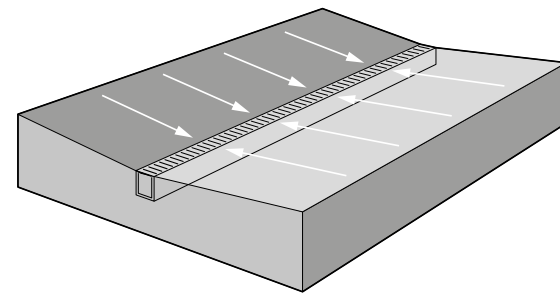
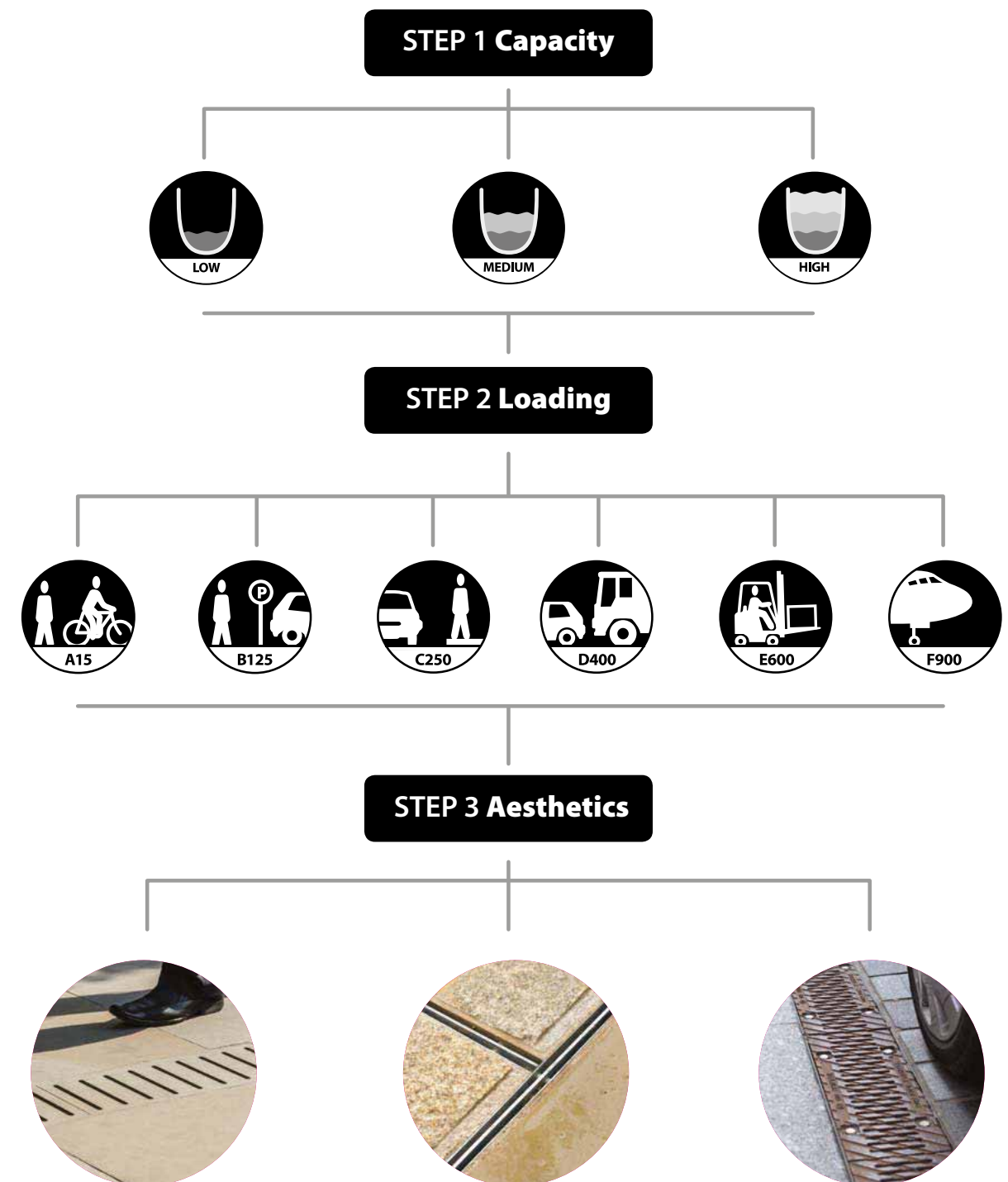


Fig. 2 Typical equivalent linear drainage system

Decision Hierarchy for Linear Drainage

The two key decision criteria to identify the correct linear drainage solution are hydraulic capacity and load classification. Hydraulic capacity is concerned with the volume of water which needs to be removed; this can be classified as either low, medium or high. Loading refers, quite simply, to what loading the drainage is subject to, ranging from pedestrians and cycles only (A15) to areas for especially high wheel loads (F900). Both of these factors are largely determined by the project with very little opportunity for change. At Marshalls we don't allow these factors to prohibit client choice. It is our aim to offer a choice of aesthetically inspired linear drainage solutions irrespective of capacity and loading requirements.



Linear Drainage

Landscape Drain



- Available in 1000mm and 500mm lengths
- Invert width of 100mm
- Available in 5 constant invert depths of 100 (0/0), 150 (5/0), 200 (10/0), 250 (15/0), 300mm (20/0)
- 20 inbuilt fall channels with a gradient of 1%, each 1000mm long
- End caps, Cap outlets and Outfalls
- Tops – Mono Slot, Duo Slot and Pave Drain (Concrete and Natural Stone), Landscape Keyblok



Birco Shallow Channel



- Available in 1000mm lengths
- Invert widths of 100, 150 and 300mm
- Available in 6 constant invert depths of 20, 40, 50, 80, 130, 180mm
- End caps and Cap outlets
- Tops – Cast Iron and Galvanised Cast Iron/Steel grates



Birco Lite Channel



- Available in 1000mm and 500mm lengths
- Invert width of 100mm
- Available in 5 constant invert depths of 90 (0/0), 115 (5/0), 140 (10/0), 165 (15/0) and 190mm (20/0)
- 20 inbuilt fall channels with a gradient of 0.5%, each 1000mm long
- T-Junctions, End caps, Cap outlets and Outfalls
- Tops – Cast Iron and Galvanised Cast Iron/Steel grates



Birco 100 Channel



- Available in 1000mm and 500mm lengths
- Invert width of 100mm
- Available in 5 constant invert depths of 100 (0/0), 150 (5/0), 200 (10/0), 250 (15/0) and 300mm (20/0)
- 20 inbuilt fall channels with a gradient of 1%, each 1000mm long
- T-Junctions, End caps, Cap outlets and Outfalls
- Tops – Cast Iron and Galvanised Cast Iron/Steel grates



Birco 150 Channel



- Available in 1000mm and 500mm lengths
- Invert width of 150mm
- Available in 5 constant invert depths of 150 (0/0), 200 (5/0), 250 (10/0), 300 (15/0) and 350mm (20/0)
- 20 inbuilt fall channels with a gradient of 1%, each 1000mm long
- T-Junctions, End caps, Cap outlets and Outfalls
- Tops – Cast Iron and Galvanised Cast Iron/Steel grates



Traffic Drain



- Available in 1000mm and 500mm lengths
- Available in 4 constant invert depths of 110 (0/0), 160 (5/0), 210 (10/0), 260mm (15/0)
- Base transition unit available
- Radius units available
- End caps, Cap outlets and Cover plates and Outfalls
- Tops – Cast Iron



Birco 200 Channel



- Available in 1000mm and 500mm lengths
- Invert width of 200mm
- Available in 4 constant invert depths of 205 (0/0), 230 (5/0), 255 (10/0), 280 (15/0) and 350mm (20/0)
- 20 inbuilt fall channels with a gradient of 1%, each 1000mm long
- T-Junctions, End caps, Cap outlets and Outfalls
- Tops – Cast Iron grates



Birco 300 Channel



- Available in 1000mm lengths
- Invert width of 300mm
- Available in 2 constant invert depths of 290 (0/0) and 430mm (5/0)
- End caps, Cap outlets and Outfalls
- Tops – Cast Iron grates



Max-E Channel



- Available in 500mm lengths
- Available in 4 constant invert depths of 100 (0/0), 170 (5/0), 240 (10/0), 520mm (15/0)
- Base transition unit available
- Access Covers, Outfalls
- Tops – Concrete, In-laid and Cast Iron



Explanation of Channel Range

Marshall's range offer of channels provides a solution for every project and scheme.

The channels, constructed of high performance concrete, ensure that all capacity requirements from low to high are catered for, as well as any loading application right from B125 up to F900.

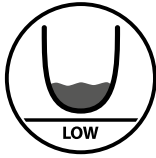
Channels

Decathlon



- Available in 2000, 1500, 1200 and 1000mm lengths
- Invert widths of 150, 250, 375, 525 and 600mm
- Available in 5 constant invert depths of 424, 530, 650, 830 and 945mm
- Stop ends, Manhole covers and frames and Silt boxes
- Tops – Concrete (Perforated, Heelguard and In-Situ)





LOW CAPACITY

Drains an area up to 750m²* or typical run lengths up to 30 lin m



CLASS B125
125kN TEST LOAD

Footways, pedestrian areas, car parks, car parking decks and similar areas used by light, slow-moving traffic.



Birco Lite 6mm Heelsure Cast Iron



CLASS C250
250kN TEST LOAD

Kerb-sides, general parking areas and hard shoulders that extend to a maximum of 0.5m into the trafficked area.



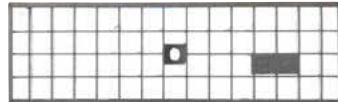
Birco Lite 12mm Slotted Cast Iron



Birco Lite 30 x 15mm Mesh Galvanised Steel



Landscape Drain Natural



Birco Lite 30 x 30mm Mesh Galvanised Steel



Birco Lite 8mm Perforated Galvanised Steel Grate



Landscape Drain Charcoal



Birco Lite 6mm Heelsure Cast Iron



Birco 100 30 x 12mm Galvanised Steel Mesh



Landscape Drain Red



Birco 100 30 x 30mm Mesh Galvanised Steel



Birco 100 12mm Slotted Cast Iron



Landscape Drain Brindle



Mono Slot Drain

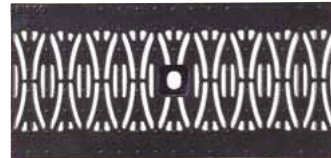


CLASS D400
400kN TEST LOAD

Carriageways of roads (including pedestrian streets and parking areas) catering for all legal road-going vehicles.



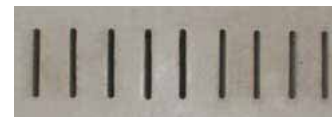
Birco Lite 6mm Heelsure Cast Iron



Birco Lite Ellipse Cast Iron



Birco Lite 12mm Slotted Cast Iron



Pave Drain Horizontal Standard Grey



Pave Drain Horizontal Conservation Silver Grey



Pave Drain Horizontal Saxon Buff



Pave Drain 45° Diagonal Standard Grey



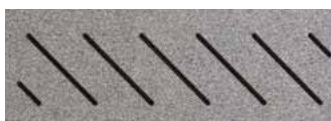
Pave Drain 45° Diagonal Conservation Silver Grey



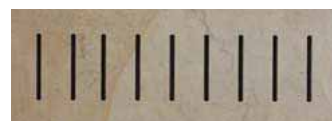
Pave Drain 45° Diagonal Saxon Buff



Pave Drain Perforated Natural Stone



Pave Drain 45° Diagonal Natural Stone



Pave Drain Horizontal Natural Stone



Duo Slot Drain



Offset Duo Slot Drain



MEDIUM CAPACITY

Drains an area up to 1750m²* or typical run lengths up to 100 lin m



Birco 150 12mm Slotted Cast Iron



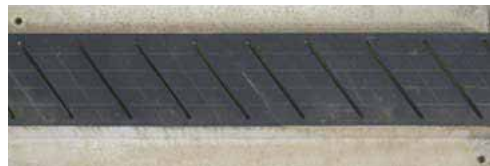
HIGH CAPACITY

Drains an area in excess of 1750m²* or typical run lengths over 100 lin m

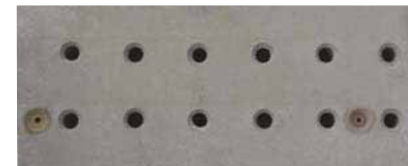
*Drainage areas are a guide and are based on a minimum gradient of 1 in 1000 and 50mm/hr



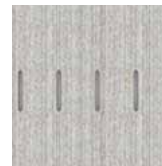
Max-E Channel Standard Grey



Decathlon Heelguard Top



Decathlon Perforated Top

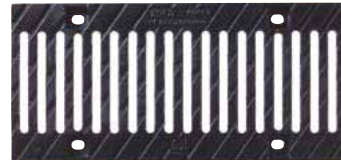


Decathlon In-Situ Lid

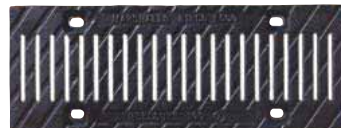


**CLASS E600
600kN TEST LOAD**

Private traffic areas used by vehicles imposing particularly heavy wheel loads.



Birco 100 12mm Slotted Cast Iron



Birco 100 6mm Heelsure Cast Iron



Birco 100 Cast Iron Solid Cover



Birco 150 Ellipse Cast Iron



Birco 150 Cast Iron Solid Cover



Birco100 12mm Wave Cast Iron



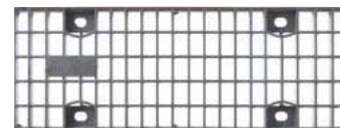
Birco 100 Galvanised Solid Cover



Birco 150 12mm Slotted Cast Iron



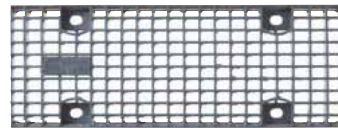
Birco 150 12mm Slotted Galvanised Cast Iron



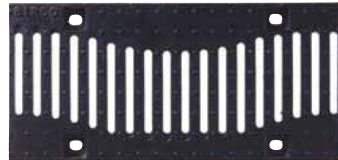
Birco 150 20 x 30mm Mesh Galvanised Steel



Birco 100 12mm Slotted Galvanised Cast Iron



Birco 100 20 x 12mm Mesh Galvanised Steel



Birco 150 12mm Wave Cast Iron



Birco 150 Galvanised Cast Iron Solid Cover



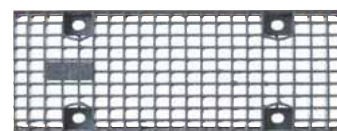
Birco 100 13mm Diagonal Cast Iron



Birco 100 20 x 30mm Mesh Galvanised Steel



Birco 150 6mm Heelsure Cast Iron



Birco 150 20 x 12mm Mesh Galvanised Steel



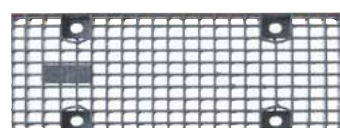
Birco 150 12mm Slotted Cast Iron



Birco 150 Galvanised Cast Iron Solid Cover



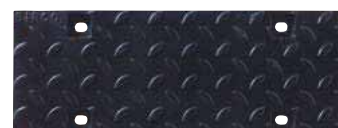
Birco 150 12mm Wave Cast Iron



Birco 150 20 x 12mm Mesh Galvanised Steel



Birco 150 6mm Heelsure Cast Iron



Birco 150 Cast Iron Solid Cover



Birco 150 Ellipse Cast Iron



Birco 150 20 x 30mm Mesh Galvanised Steel



Birco 150 12mm Slotted Galvanised Cast Iron



Birco 200 18mm Slotted Cast Iron



Birco 200 18mm Slotted Cast Iron



Birco 300 20mm Slotted Cast Iron



Max-E Channel Reinforced Standard Grey

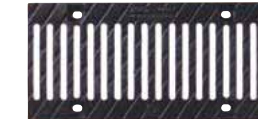


Max-E Channel Conservation Silver Grey



**CLASS F900
900kN TEST LOAD**

Special areas of abnormally heavy wheel loads e.g. aircraft pavements.



Birco 100 12mm Slotted Cast Iron



Traffic Drain



Birco 150 12mm Slotted Cast Iron



Traffic Drain



Birco 300 20mm Slotted Cast Iron



Max-E-Channel Cast Iron

Hydraulic capacity and load classification are two key considerations when using linear channel drainage, although, to a degree both are predetermined by project specifics. The style of drainage top is a third consideration which can be made with far more freedom. With a number of different channel top formats in a variety of materials Marshalls offers choice with a solution to enhance any project.



Linear Drainage Tops



Background

London Bridge Station, the fourth busiest station in the country, is undergoing a huge redevelopment project which will create new platforms allowing for more trains, a new concourse and a bigger station to accommodate the 50 million passengers it brings into the city each year.

The improvements will be funded by the Thameslink programme, a £6bn Government investment in rail.

Challenge

Marshalls was selected to supply and fit drainage products for the first phases at London Bridge station. The project will involve the construction of 15 new platforms in total over the next four years.

Marshalls has been involved in this long-term project for Network Rail for the last three years, working closely alongside Grimshaw Architects and engineering and construction group Costain's in-house design and procurement teams to provide the most suitable products.

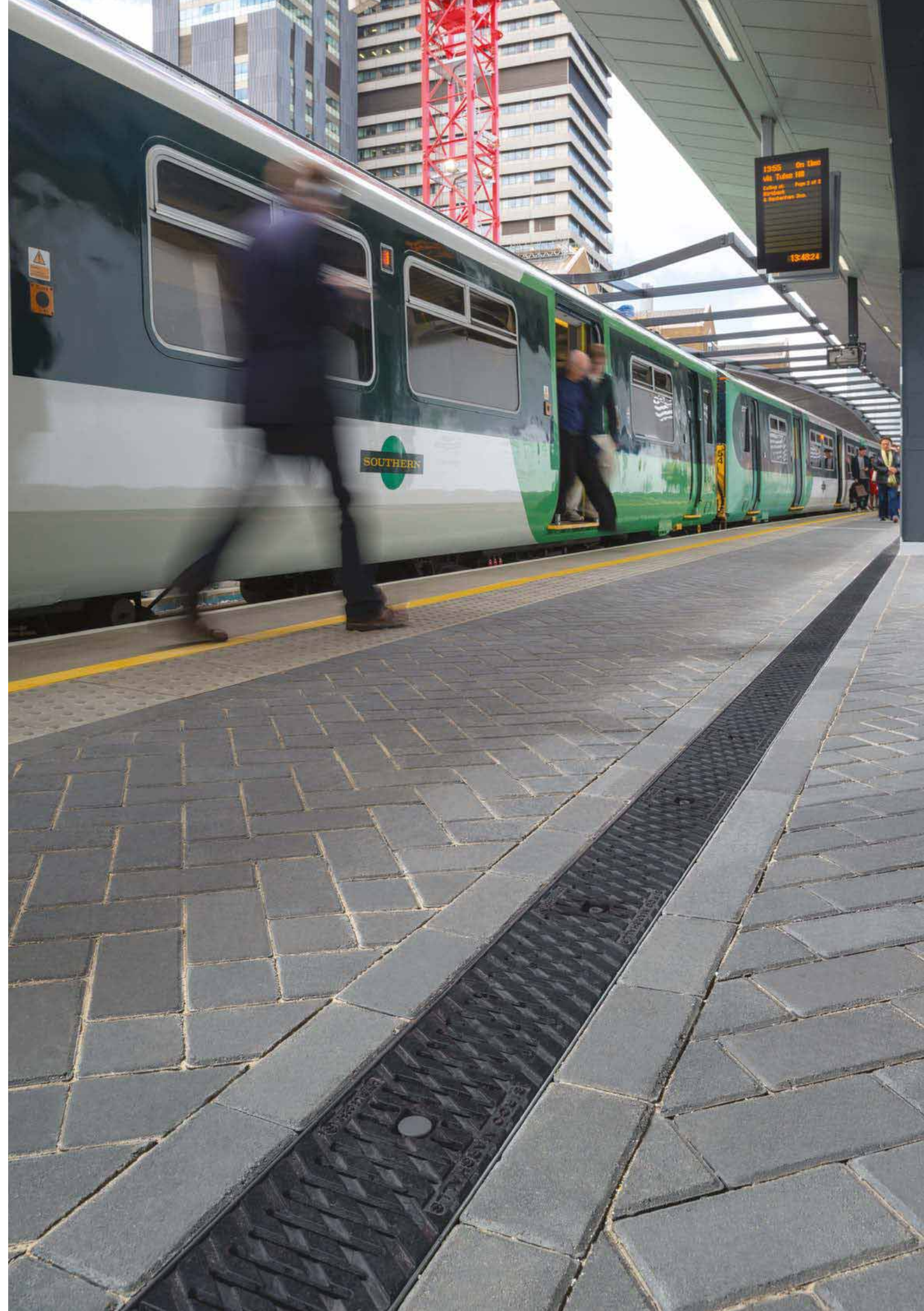
The station re-development is expected to be completed by 2018. Two platforms have already been completed using a number of Marshalls' drainage products and a further three are underway.

A high-performance, easy traffickable drainage product was required to remove water quickly and efficiently away from the platform edge to create a safe area for passengers to board and disembark the trains.

Network Rail set out strict criteria, demanding adherence to tight deadlines and the use of high specification products. On top of this, as a key supplier, Marshalls had to access the site - still a very busy, functioning train station – with timed deliveries, usually between 4pm and 10pm through the centre of the capital while keeping disruption to a minimum.

Solution

With numerous tests undertaken before construction began, Marshalls was able to prove its products were suitable in both aesthetics and function.



London Bridge Station

Birco Lite, London



The combination of a Birco Lite Grate with Birco Profil Channel was offered as an alternative, rather than the originally specified system using stainless steel. A radical departure from other forms of surface water drainage, Birco's ability to intercept, store and transport surface water in a cost-effective and efficient way, was ideal for these platforms.

This combination not only allowed for the more unusual tight 100mm space in which to install, but, with its galvanised channel and Birco Lite cast iron top, also proved much more economical than stainless steel.

Side drainage was also required which was accommodated into the final design and altogether around 4,000 linear meters of drainage will be required.

Benefits

Using Marshalls' products and its expert knowledge of linear drainage and installation allowed Network Rail to keep to their tight deadlines while keeping a busy station up and running.

Marshalls has worked closely with the architect and engineers over a long period of time, allowing them to get under the skin of the project, coming up with cost-saving and effective alternative products.

Working with Marshalls ensured that Network Rail and the engineers were happy with the products, testing them before construction began and have an expert, dedicated team on hand to complete the first phase of the project while working towards the next stage.



As the demand for more cost effective and simple drainage systems grows, Marshalls Mono Beany was selected to help improve a busy A road along the south coast.

Challenge

The A259 is a busy road that runs along the south coast passing through Hampshire, West Sussex, East Sussex and part of Kent. The Highways Agency wanted to put measures in place that would improve part of the road close to the village of Guestling Green near Hastings. To make it more reliable and safe for users, the project involved resurfacing to prolong the life of the carriageway and also required a more effective drainage system.

A team of engineering consultants was appointed to design the new road improvements, including the use of a permeable system and replacement of the gullies, which had caused previous problems with overflowing.

Solution

Carnell Contractors partnered with the Highways Agency to implement the improvements and worked with Marshalls to evolve the design using Mono Beany to help resolve the previous drainage issues.

Mono Beany is manufactured from Marshalls M-Tech concrete and carries the British Standard Kitemark. This high-strength concrete is cast around a rotationally moulded plastic core, which provides increased strength with less material as well as reduced flow resistance.

As it is a one piece system, design is straightforward and installation is simple, which ensured that Marshalls was able to meet the specification developed by the engineering consultants.

Approximately 600m of the product was provided including a mix of both Half Battered and 45° Splayed components. Droppers and Centre Stones were also supplied and used at the access points where vehicles drive across the kerb line. These enable the surface water to drain at these locations, ensuring it doesn't collect and cause future flooding problems.

Marshalls worked closely with Carnell throughout the six-week project to deliver the required elements of the system in the specific timescales requested by the contractor.

Benefits

To minimise disruption for road users, the project had to be completed as quickly and effectively as possible. The one piece design combined with the fact that only a single mechanical lift is required per metre, meant that Mono Beany was quick to install and in turn, helped to reduce costs.

Specifically designed for low to medium flow capacity, the product also has excellent surface drainage efficiency. Inlet apertures are 500mm apart, which significantly reduces running or fast flowing water on the carriageway and eliminates ponding.

The benefits of the Mono Beany have been recognised by Carnell Contractors, which has selected the system for another highways project in East Sussex. Around 250m of Mono Beany has been installed 20 miles away, along a stretch of the A21 to help upgrade the road.



A259
Mono Beany, East Sussex





Pave Drain, Yorkstone, Holborn

Pave Drain
Concrete Drainage System



Standard Grey



Conservation Silver Grey



Saxon Buff



Scoutmoor



Granite Mid Grey



Granite Silver Grey

Marshalls Pave Drain offers a unique aesthetic for linear drainage. Through our concrete expertise and heritage in natural stone we have developed a drainage solution to complement our most popular paving products. Pave Drain is a traffickable unit available in a variety of designs and finishes, suitable for any public realm development.

See my related products...

Conservation Textured Paving.....	pg 57
Saxon Paving.....	pg 64-65
Standard Paving.....	pg 68
Scoutmoor Natural Stone.....	pg 114
Granite Paving.....	pg 130

Tops	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Standard Grey	Conservation Silver Grey	Saxon Buff
Horizontal Heelsure 6mm Slot	500	200	113	22	DR497010	DR497025	DR497040
45° Diagonal Heelsure 5mm Slot	500	200	113	22	DR497015	DR497030	DR497045
Perforated	500	200	113	22		DR497035	DR497050

Tops	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Scoutmoor	Mid Grey Granite	Silver Grey Granite
Horizontal Heelsure 6mm Slot	500	200	113	22	DR497510	DR497525	DR497540
45° Diagonal Heelsure 5mm Slot	500	200	113	22	DR497515	DR497530	DR497545
Perforated	500	200	113	22	DR497520	DR497535	DR497550

NSPlus

Q10 170

CO₂ per m²

For the latest carbon value visit

www.marshalls.co.uk/commercial/carbon-calculator

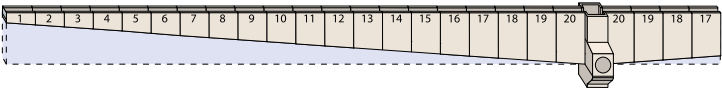


Pave Drain, Yorkstone, Edinburgh

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	200	100	160	100	52	DR320610
Channel 5/0	1000	200	100	210	150	64	DR320620
Channel 10/0	1000	200	100	260	200	76	DR320630
Channel 15/0	1000	200	100	310	250	88	DR320640
Channel 20/0	1000	200	100	360	300	100	DR320650
Channel 0/0	500	200	100	160	100	27	DR331010
Channel 5/0	500	200	100	210	150	33	DR331020
Channel 10/0	500	200	100	260	200	38	DR331030
Channel 15/0	500	200	100	310	250	43	DR331040
Channel 20/0	500	200	100	360	300	51	DR331050

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	200	100	160/170	100/110	53	DR330010
IBF Channel No. 2	1000	200	100	170/180	110/120	55.5	DR330020
IBF Channel No. 3	1000	200	100	180/190	120/130	58	DR330030
IBF Channel No. 4	1000	200	100	190/200	130/140	60.5	DR330040
IBF Channel No. 5	1000	200	100	200/210	140/150	63	DR330050
IBF Channel No. 6	1000	200	100	210/220	150/160	65	DR330060
IBF Channel No. 7	1000	200	100	220/230	160/170	67.5	DR330070
IBF Channel No. 8	1000	200	100	230/240	170/180	70	DR330080
IBF Channel No. 9	1000	200	100	240/250	180/190	72.5	DR330090
IBF Channel No. 10	1000	200	100	250/260	190/200	75	DR330100
IBF Channel No. 11	1000	200	100	260/270	200/210	77	DR330110
IBF Channel No. 12	1000	200	100	270/280	210/220	79.5	DR330120
IBF Channel No. 13	1000	200	100	280/290	220/230	82	DR330130
IBF Channel No. 14	1000	200	100	290/300	230/240	84.5	DR330140
IBF Channel No. 15	1000	200	100	300/310	240/250	87	DR330150
IBF Channel No. 16	1000	200	100	310/320	250/260	89	DR330160
IBF Channel No. 17	1000	200	100	320/330	260/270	91.5	DR330170
IBF Channel No. 18	1000	200	100	330/340	270/280	94	DR330180
IBF Channel No. 19	1000	200	100	340/350	280/290	96.5	DR330190
IBF Channel No. 20	1000	200	100	350/360	290/230	99	DR330200

Inbuilt Fall

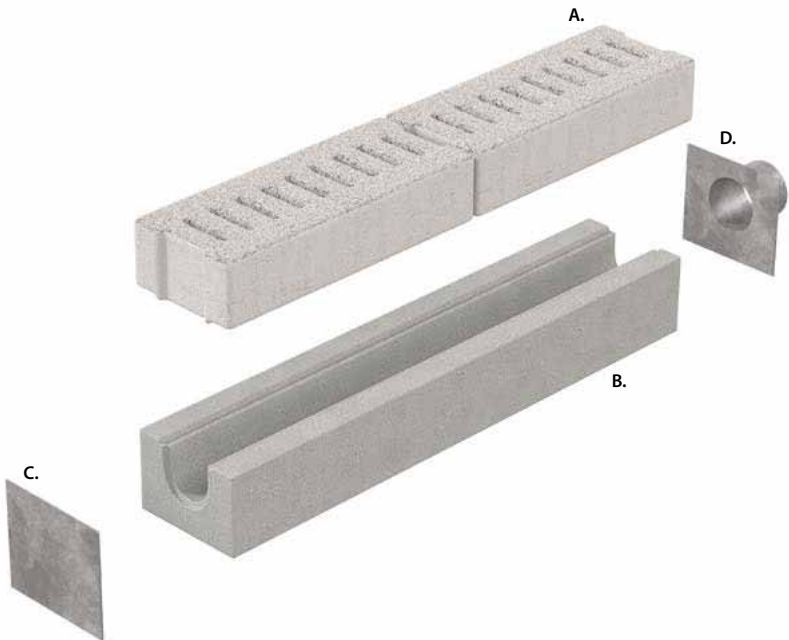


Pave Drain Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR125150
100 End Cap 5/0	1.2	DR125155
100 End Cap 10/0	1.4	DR125160
100 End Cap 15/0	1.6	DR125165
100 End Cap 20/0	1.8	DR125170
100 Cap Outlet 0/0	1.0	DR125175
100 Cap Outlet 5/0	1.2	DR125185
100 Cap Outlet 10/0	1.4	DR125185
100 Cap Outlet 15/0	1.6	DR125190
100 Cap Outlet 20/0	1.8	DR125195
Landscape Outfalls 100mm End	104	DR355670
Landscape Outfalls150mm Side	142	DR355675

Access Covers	Unit Weight (kg)	Item Code
Pave Drain Access Cover 150mm	32	DR497900
Access Cover 500mm Long	14	DR495800

Pave Drain with reference numbers indicated in **bold** black are available ex-stock. Pave Drain with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



- A. Pave Drain Top
- B. Base Channel
- C. End Cap
- D. Cap Outlet



Duo Slot Drain, Liverpool

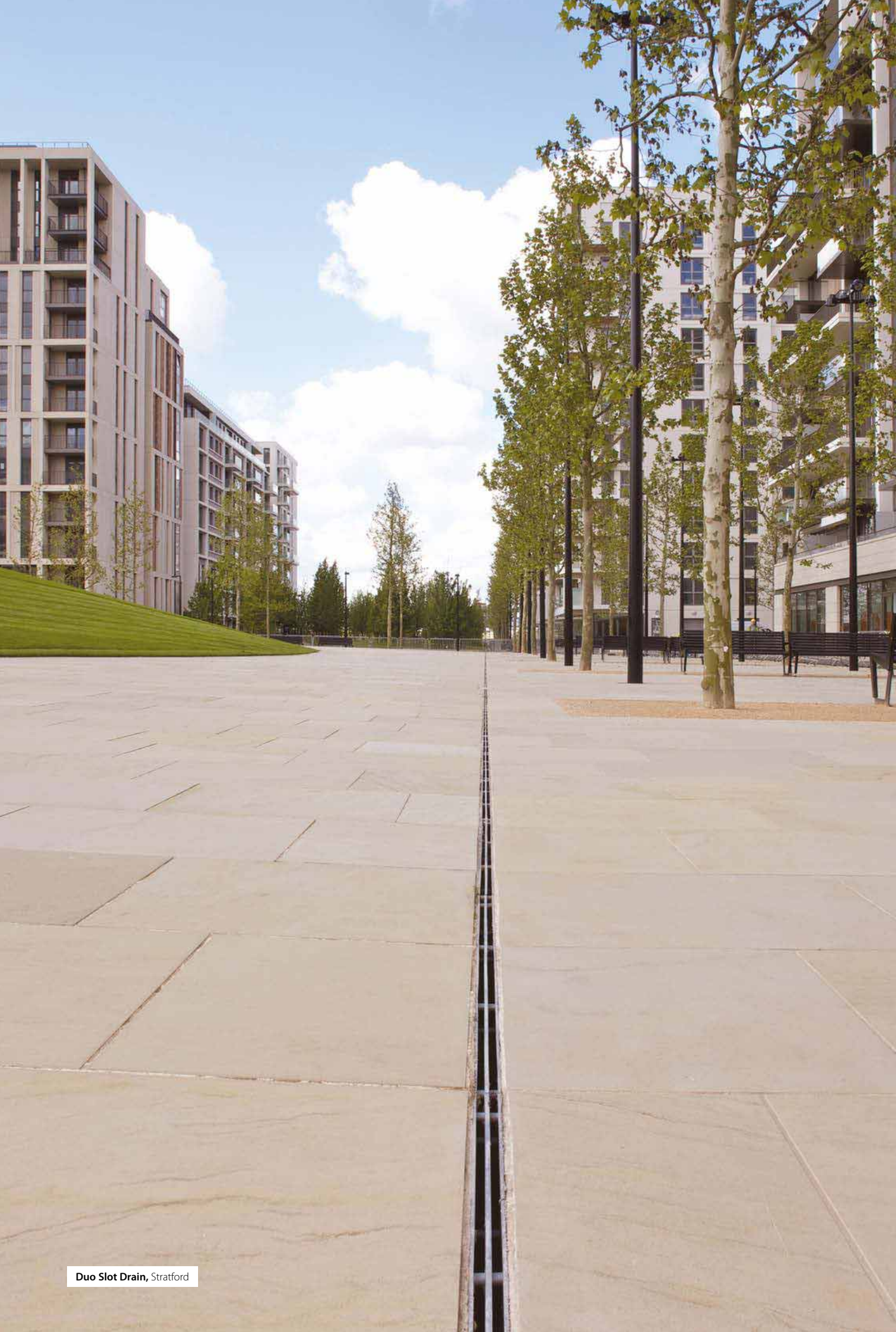
Duo Slot Drain

Slot Drainage System



A highly effective yet beautifully discreet linear drainage solution. Duo Slot Drain is a galvanised steel unit with two slot apertures which sit on a robust concrete drainage channel. The ideal partner for premium concrete flags, blocks or natural stone paving which creates an almost invisible and traffickable system to remove surface water.

Top Units	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
Top	1000	130	105	8.5	DR495830
Top	500	130	105	4.25	DR495840
Offset Top	1000	189	105	11.4	DR495850
Offset Top	500	189	105	5.7	DR495860

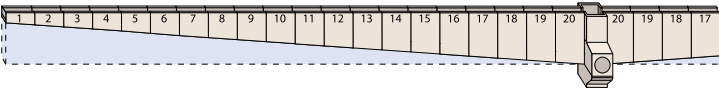


Duo Slot Drain, Stratford

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	200	100	160	100	52	DR320610
Channel 5/0	1000	200	100	210	150	64	DR320620
Channel 10/0	1000	200	100	260	200	76	DR320630
Channel 15/0	1000	200	100	310	250	88	DR320640
Channel 20/0	1000	200	100	360	300	100	DR320650
Channel 0/0	500	200	100	160	100	27	DR331010
Channel 5/0	500	200	100	210	150	33	DR331020
Channel 10/0	500	200	100	260	200	38	DR331030
Channel 15/0	500	200	100	310	250	43	DR331040
Channel 20/0	500	200	100	360	300	51	DR331050

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	200	100	160/170	100/110	53	DR330010
IBF Channel No. 2	1000	200	100	170/180	110/120	55.5	DR330020
IBF Channel No. 3	1000	200	100	180/190	120/130	58	DR330030
IBF Channel No. 4	1000	200	100	190/200	130/140	60.5	DR330040
IBF Channel No. 5	1000	200	100	200/210	140/150	63	DR330050
IBF Channel No. 6	1000	200	100	210/220	150/160	65	DR330060
IBF Channel No. 7	1000	200	100	220/230	160/170	67.5	DR330070
IBF Channel No. 8	1000	200	100	230/240	170/180	70	DR330080
IBF Channel No. 9	1000	200	100	240/250	180/190	72.5	DR330090
IBF Channel No. 10	1000	200	100	250/260	190/200	75	DR330100
IBF Channel No. 11	1000	200	100	260/270	200/210	77	DR330110
IBF Channel No. 12	1000	200	100	270/280	210/220	79.5	DR330120
IBF Channel No. 13	1000	200	100	280/290	220/230	82	DR330130
IBF Channel No. 14	1000	200	100	290/300	230/240	84.5	DR330140
IBF Channel No. 15	1000	200	100	300/310	240/250	87	DR330150
IBF Channel No. 16	1000	200	100	310/320	250/260	89	DR330160
IBF Channel No. 17	1000	200	100	320/330	260/270	91.5	DR330170
IBF Channel No. 18	1000	200	100	330/340	270/280	94	DR330180
IBF Channel No. 19	1000	200	100	340/350	280/290	96.5	DR330190
IBF Channel No. 20	1000	200	100	350/360	290/230	99	DR330200

Inbuilt Fall



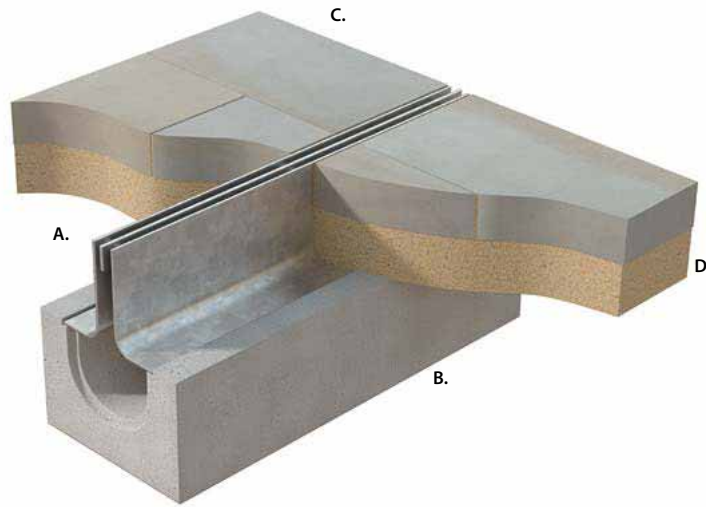
Landscape Drain Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR125150
100 End Cap 5/0	1.2	DR125155
100 End Cap 10/0	1.4	DR125160
100 End Cap 15/0	1.6	DR125165
100 End Cap 20/0	1.8	DR125170
100 Cap Outlet 0/0	1	DR125175
100 Cap Outlet 5/0	1.2	DR125185
100 Cap Outlet 10/0	1.4	DR125185
100 Cap Outlet 15/0	1.6	DR125190
100 Cap Outlet 20/0	1.8	DR125195
Outfall 100mm End	104	DR355670
Outfall 150mm Side	142	DR355675

Access Cover	Unit Weight (kg)	Item Code
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Access Cover 500mm Long 14 **DR495800**

Duo Slot Drain with reference numbers indicated in **bold** black are available ex-stock. Duo Slot Drain with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



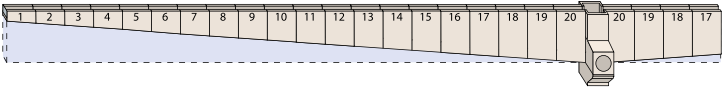
- A. Top Unit Slot Drain Duo
- B. Base Channel
- C. Paving
- D. Sub Base

Top Units	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
Top Unit	1000	125	110	6	DR495820
Top Unit	500	125	110	3	DR495810

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	200	100	160	100	52	DR320610
Channel 5/0	1000	200	100	210	150	64	DR320620
Channel 10/0	1000	200	100	260	200	76	DR320630
Channel 15/0	1000	200	100	310	250	88	DR320640
Channel 20/0	1000	200	100	360	300	100	DR320650
Channel 0/0	500	200	100	160	100	27	DR331010
Channel 5/0	500	200	100	210	150	33	DR331020
Channel 10/0	500	200	100	260	200	38	DR331030
Channel 15/0	500	200	100	310	250	43	DR331040
Channel 20/0	500	200	100	360	300	51	DR331050

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	200	100	160/170	100/110	53	DR330010
IBF Channel No. 2	1000	200	100	170/180	110/120	55.5	DR330020
IBF Channel No. 3	1000	200	100	180/190	120/130	58	DR330030
IBF Channel No. 4	1000	200	100	190/200	130/140	60.5	DR330040
IBF Channel No. 5	1000	200	100	200/210	140/150	63	DR330050
IBF Channel No. 6	1000	200	100	210/220	150/160	65	DR330060
IBF Channel No. 7	1000	200	100	220/230	160/170	67.5	DR330070
IBF Channel No. 8	1000	200	100	230/240	170/180	70	DR330080
IBF Channel No. 9	1000	200	100	240/250	180/190	72.5	DR330090
IBF Channel No. 10	1000	200	100	250/260	190/200	75	DR330100
IBF Channel No. 11	1000	200	100	260/270	200/210	77	DR330110
IBF Channel No. 12	1000	200	100	270/280	210/220	79.5	DR330120
IBF Channel No. 13	1000	200	100	280/290	220/230	82	DR330130
IBF Channel No. 14	1000	200	100	290/300	230/240	84.5	DR330140
IBF Channel No. 15	1000	200	100	300/310	240/250	87	DR330150
IBF Channel No. 16	1000	200	100	310/320	250/260	89	DR330160
IBF Channel No. 17	1000	200	100	320/330	260/270	91.5	DR330170
IBF Channel No. 18	1000	200	100	330/340	270/280	94	DR330180
IBF Channel No. 19	1000	200	100	340/350	280/290	96.5	DR330190
IBF Channel No. 20	1000	200	100	350/360	290/230	99	DR330200

Inbuilt Fall

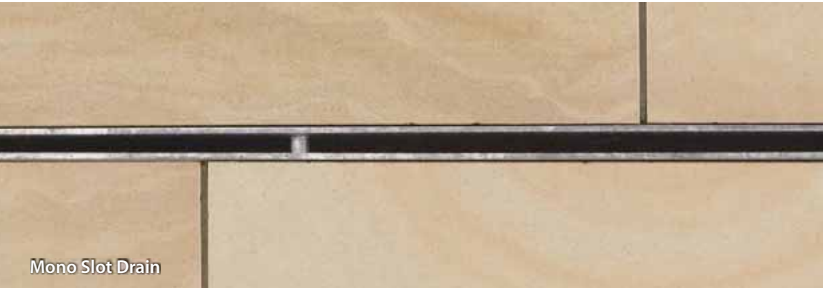


Mono Slot Drain Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

Mono Slot Drain with reference numbers indicated in **bold** black are available ex-stock. Mono Slot Drain with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

Mono Slot Drain

Slot Drainage System




A discreet linear drainage solution. The galvanised steel slot unit sits on top of a robust concrete drainage channel. Marshalls Mono Slot Drain is the perfect partner to concrete flag or concrete block paving, creating an almost invisible solution for removing surface water.

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR125150
100 End Cap 5/0	1.2	DR125155
100 End Cap 10/0	1.4	DR125160
100 End Cap 15/0	1.6	DR125165
100 End Cap 20/0	1.8	DR125170
100 Cap Outlet 0/0	1	DR125175
100 Cap Outlet 5/0	1.2	DR125185
100 Cap Outlet 10/0	1.4	DR125185
100 Cap Outlet 15/0	1.6	DR125190
100 Cap Outlet 20/0	1.8	DR125195
Outfall 100mm End	104	DR355670
Outfall 150mm Side	142	DR355675

Access Cover	Unit Weight (kg)	Item Code
Slot Drain Access Cover & Frame	10	DR495800

nsPlus

Q10 170

kg

CO₂ per m²

For the latest carbon value visit

www.marshalls.co.uk/commercial/carbon-calculator

Mono Slot Drain, Doncaster



Landscape Drain, Brindle, Buxton

Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Pack Size	Pack Weight (kg)	Keyblok Natural Item Code	Keyblok Charcoal Item Code	Keyblok Red Item Code	Keyblok Brindle Item Code
1245	200	110	4.8	16 Lin.m	768	DR515030	DR515040	DR515050	DR515060

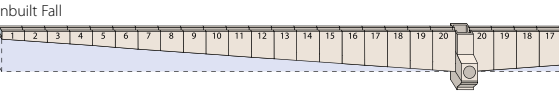
Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	200	100	160	100	52	DR320610
Channel 5/0	1000	200	100	210	150	64	DR320620
Channel 10/0	1000	200	100	260	200	76	DR320630
Channel 15/0	1000	200	100	310	250	88	DR320640
Channel 20/0	1000	200	100	360	300	100	DR320650
Channel 0/0	500	200	100	160	100	27	DR331010
Channel 5/0	500	200	100	210	150	33	DR331020
Channel 10/0	500	200	100	260	200	38	DR331030
Channel 15/0	500	200	100	310	250	43	DR331040
Channel 20/0	500	200	100	360	300	51	DR331050

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	200	100	160/170	100/110	53	DR330010
IBF Channel No. 2	1000	200	100	170/180	110/120	55.5	DR330020
IBF Channel No. 3	1000	200	100	180/190	120/130	58	DR330030
IBF Channel No. 4	1000	200	100	190/200	130/140	60.5	DR330040
IBF Channel No. 5	1000	200	100	200/210	140/150	63	DR330050
IBF Channel No. 6	1000	200	100	210/220	150/160	65	DR330060
IBF Channel No. 7	1000	200	100	220/230	160/170	67.5	DR330070
IBF Channel No. 8	1000	200	100	230/240	170/180	70	DR330080
IBF Channel No. 9	1000	200	100	240/250	180/190	72.5	DR330090
IBF Channel No. 10	1000	200	100	250/260	190/200	75	DR330100
IBF Channel No. 11	1000	200	100	260/270	200/210	77	DR330110
IBF Channel No. 12	1000	200	100	270/280	210/220	79.5	DR330120
IBF Channel No. 13	1000	200	100	280/290	220/230	82	DR330130
IBF Channel No. 14	1000	200	100	290/300	230/240	84.5	DR330140
IBF Channel No. 15	1000	200	100	300/310	240/250	87	DR330150
IBF Channel No. 16	1000	200	100	310/320	250/260	89	DR330160
IBF Channel No. 17	1000	200	100	320/330	260/270	91.5	DR330170
IBF Channel No. 18	1000	200	100	330/340	270/280	94	DR330180
IBF Channel No. 19	1000	200	100	340/350	280/290	96.5	DR330190
IBF Channel No. 20	1000	200	100	350/360	290/230	99	DR330200

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR125150
100 End Cap 5/0	1.2	DR125155
100 End Cap 10/0	1.4	DR125160
100 End Cap 15/0	1.6	DR125165
100 End Cap 20/0	1.8	DR125170
100 Cap Outlet 0/0	1.0	DR125175
100 Cap Outlet 5/0	1.2	DR125185
100 Cap Outlet 10/0	1.4	DR125185
100 Cap Outlet 15/0	1.6	DR125190
100 Cap Outlet 20/0	1.8	DR125195
Outfall 100mm End	104	DR355670
Outfall 150mm Side	142	DR355675

Access Cover	Unit Weight (kg)	Item Code
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Landscape Drain Access Cover 14 **DR515140**



Landscape Drain Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

Landscape Drain with reference numbers indicated in **bold** black are available ex-stock. Landscape Drain with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



Landscape Drain

Concrete Drainage System

See my related products...

Keyblok Setts Block Paving	pg 37
Keyblok Block Paving.....	pg 38-39
Keyblok Vintage Block Paving	pg 40
Keyblok Extensions Block Paving.....	pg 41
Keykerb Kerb	pg 101-102

Landscape Drain is a low capacity linear drainage system that blends perfectly into block paved surfaces, providing a seamless finish to your landscape. The simple dished channel design manages water on the surface, minimising opportunities for blockage and making maintenance a simple task. A range of colours is available to blend in with the surrounding surface or alternatively to create a contrasting visual feature of the channel. A full range of ancillary parts are available making Landscape Drain the perfect choice for any block paved area.

n55Plus

Q10 170

CO₂ per m²

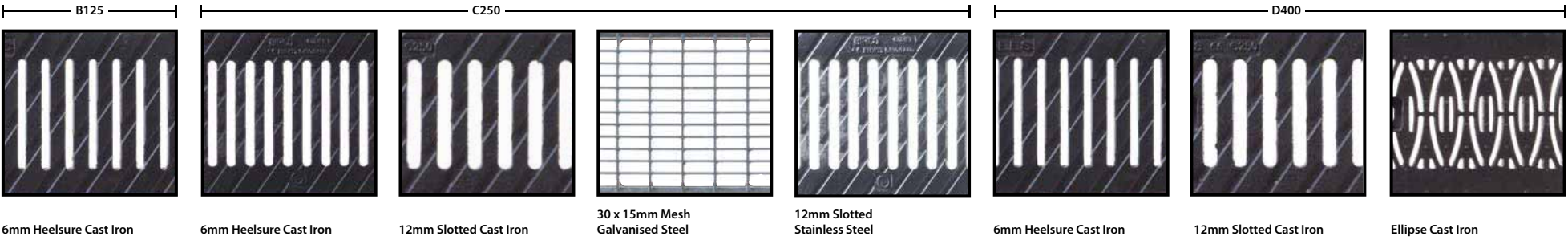
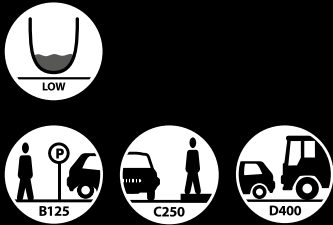
For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator



Birco Lite, London Bridge Station

Birco Lite

Grid Drainage System



A general purpose low capacity linear drainage system which combines a robust concrete channel with a wide aesthetic range of cast iron, stainless steel or galvanised grates. Available for both pedestrian and standard trafficking applications, making it suitable for a variety of projects including civic, commercial and rail applications.

Gratings	Loading	Length (mm)	Width (mm)	Unit Weight (kg)	Item Code
6mm Heelsure Cast Iron	B125	500	160	3.8	DR035345
6mm Heelsure Cast Iron	C250	500	160	3.8	DR035360
12mm Slotted Cast Iron	C250	500	160	3.9	DR035350
30 x 15mm Mesh Galvanised Steel	C250	1000	160	4.2	DR040465
12mm Slotted Stainless Steel	C250	500	160	2.7	DR041020
6mm Heelsure Cast Iron	D400	500	160	4.5	DR035366
12mm Slotted Cast Iron	D400	500	160	4.95	DR035363
Ellipse Cast Iron	D400	500	160	5.7	DR041020

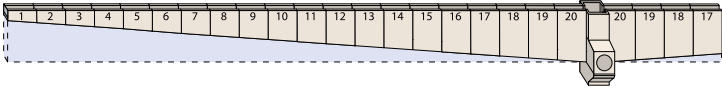


Birco Lite, Manchester

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	160	100	170	90	38	DR005015
Channel 5/0	1000	160	100	195	115	46	DR005025
Channel 10/0	1000	160	100	220	140	54	DR005035
Channel 15/0	1000	160	100	245	165	62	DR005045
Channel 20/0	1000	160	100	270	190	70	DR005055
Channel 0/0	500	160	100	170	90	19	DR010165
Channel 5/0	500	160	100	195	115	23	DR010175
Channel 10/0	500	160	100	220	140	27	DR010185
Channel 15/0	500	160	100	245	165	31	DR010195

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Invert Depth (mm) Upstream/Downstream	Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	160	100	90/95	170/175	33.5	DR020015
IBF Channel No. 2	1000	160	100	95/100	175/180	34	DR020025
IBF Channel No. 3	1000	160	100	100/105	180/185	34.5	DR020035
IBF Channel No. 4	1000	160	100	105/110	185/190	35	DR020045
IBF Channel No. 5	1000	160	100	110/115	190/195	35.5	DR020055
IBF Channel No. 6	1000	160	100	115/120	195/200	36.5	DR020065
IBF Channel No. 7	1000	160	100	120/125	200/205	37	DR020075
IBF Channel No. 8	1000	160	100	125/130	205/210	37.5	DR020085
IBF Channel No. 9	1000	160	100	130/135	210/215	38	DR020095
IBF Channel No. 10	1000	160	100	135/140	215/220	38.5	DR020105
IBF Channel No. 11	1000	100	100	140/145	220/225	39.5	DR020115
IBF Channel No. 12	1000	100	100	145/150	225/230	40	DR020125
IBF Channel No. 13	1000	100	100	150/155	230/235	40.5	DR020135
IBF Channel No. 14	1000	100	100	155/160	235/240	41	DR020145
IBF Channel No. 15	1000	100	100	160/165	240/245	41.5	DR020155
IBF Channel No. 16	1000	100	100	165/170	245/250	41.5	DR020165
IBF Channel No. 17	1000	100	100	170/175	250/255	43	DR020175
IBF Channel No. 18	1000	100	100	175/180	255/260	43.5	DR020185
IBF Channel No. 19	1000	100	100	180/185	260/265	44	DR020195
IBF Channel No. 20	1000	100	100	185/190	265/270	44.5	DR020205

Inbuilt Fall



Birco Lite Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

T Junction Channels	Unit Weight (kg)	Item Code
T- Channel 0/0	19	DR010210
T- Channel 5/0	23	DR010220
T- Channel 10/0	27	DR010230

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR045100
100 End Cap 5/0	1.2	DR045110
100 End Cap 10/0	1.4	DR045120
100 End Cap 15/0	1.6	DR045130
100 End Cap 20/0	1.8	DR045130
100 Cap Outlet 0/0	1	DR045150
100 Cap Outlet 5/0	1.2	DR045160
100 Cap Outlet 10/0	1.4	DR045170
100 Cap Outlet 15/0	1.6	DR045180
100 Cap Outlet 20/0	1.8	DR045190
Lite End Outfall 100mm	101	DR050100
Lite Side Outfall 150mm	137	DR050110

Birco Lite with reference numbers indicated in **bold** black are available ex-stock. Birco Lite with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

A. Top Grate

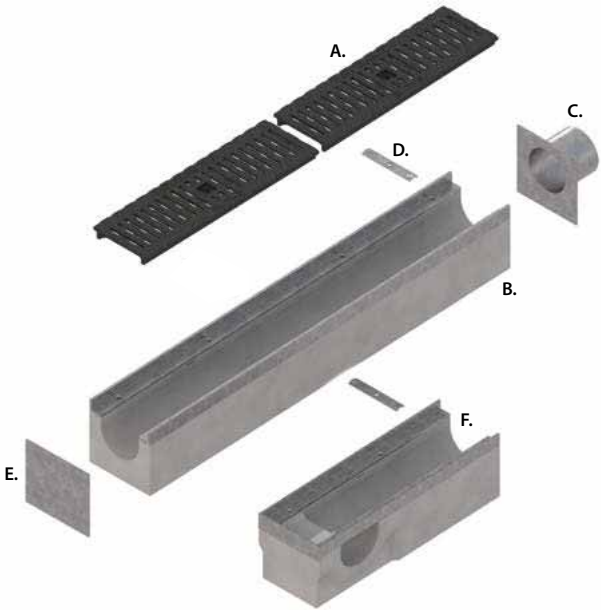
B. Channel

C. Cap Outlet

D. Locking Bars

E. End Cap

F. T-Junction Channel





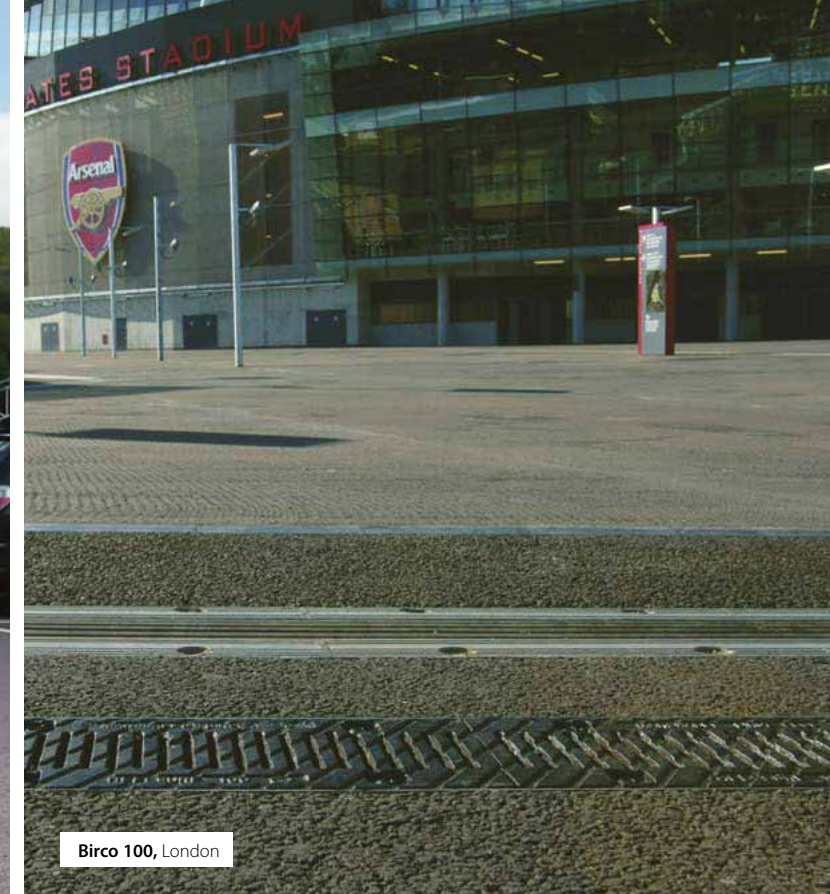
Birco 100, Manchester



Birco 100, Bargoed



Birco 100, Taff Ely College



Birco 100, London



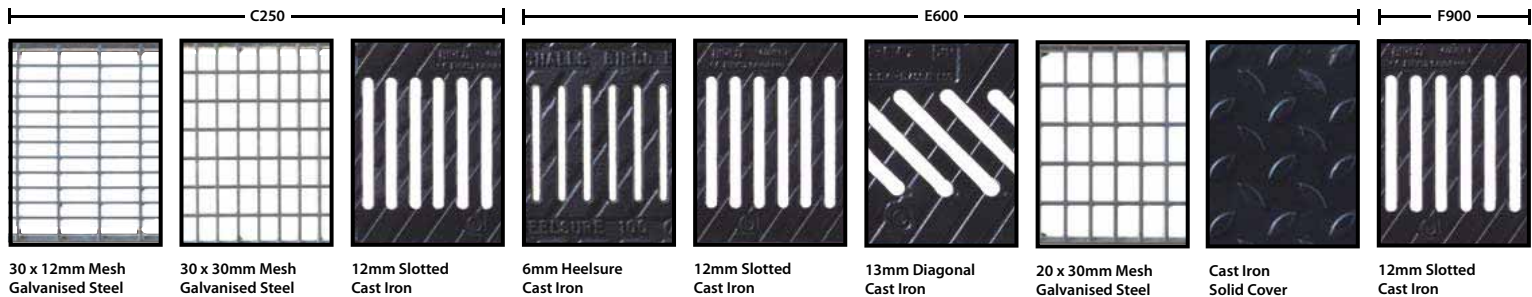
Birco 100, Bargoed



Birco 100, Manchester



Birco 100, Manchester



Gratings	Loading	Length (mm)	Width (mm)	Unit Weight (kg)	Item Code
30 x 12mm Mesh Galvanised Steel	C250	500	200	3.31	DR115275
30 x 30mm Mesh Galvanised Steel	C250	500	200	2.67	DR115260
12mm Slotted Cast Iron	C250	500	200	5.0	DR115120
6mm Heelsure Cast Iron	E600	500	200	7.2	DR115135
12mm Slotted Cast Iron	E600	500	200	6.2	DR115125
13mm Diagonal Cast Iron	E600	500	200	12.4	DR115020
20 x 30mm Mesh Galvanised Steel	E600	500	200	4.86	DR115285
Cast Iron Solid Cover	E600	500	200	7.46	DR115250
12mm Slotted Cast Iron	F900	500	200	7.4	DR115130

Birco 100

Grid Drainage System

LOW

C250


E600

F900

A multi-purpose low capacity linear drainage system, combining a robust concrete channel with a wide aesthetic choice of cast iron, stainless steel or galvanised grates. A variety of loadings make Birco 100 suitable for light to heavy trafficking so suitable for a variety of projects including civic, commercial, rail and industrial applications.

nssPlus

Q10 180

kg

CO₂ per m²

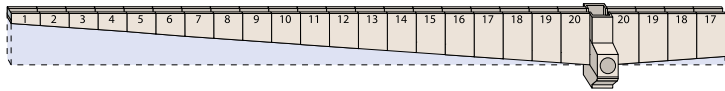
For the latest carbon value visit

www.marshalls.co.uk/commercial/carbon-calculator

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	200	100	180	100	54	DR080105
Channel 5/0	1000	200	100	230	150	66	DR080115
Channel 10/0	1000	200	100	280	200	78	DR080125
Channel 15/0	1000	200	100	330	250	90	DR080135
Channel 20/0	1000	200	100	380	300	102	DR080145
Channel 0/0	500	200	100	180	100	27	DR090150
Channel 5/0	500	200	100	230	150	33	DR090160
Channel 10/0	500	200	100	280	200	38	DR090170
Channel 15/0	500	200	100	330	250	43	DR090180
Channel 20/0	500	200	100	380	300	51	DR090190

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	200	100	180/190	100/110	57	DR020010
IBF Channel No. 2	1000	200	100	190/200	110/120	57.5	DR020020
IBF Channel No. 3	1000	200	100	200/210	120/130	61	DR020030
IBF Channel No. 4	1000	200	100	210/220	130/140	62.5	DR020040
IBF Channel No. 5	1000	200	100	220/230	140/150	65	DR020050
IBF Channel No. 6	1000	200	100	230/240	150/160	67	DR020060
IBF Channel No. 7	1000	200	100	240/250	160/170	69	DR020070
IBF Channel No. 8	1000	200	100	250/260	170/180	71	DR020080
IBF Channel No. 9	1000	200	100	260/270	180/190	73	DR020090
IBF Channel No. 10	1000	200	100	270/280	190/200	77	DR020100
IBF Channel No. 11	1000	200	100	280/290	210/220	77	DR020110
IBF Channel No. 12	1000	200	100	290/300	220/230	81.5	DR020120
IBF Channel No. 13	1000	200	100	300/310	230/240	81	DR020130
IBF Channel No. 14	1000	200	100	310/320	250/260	86.5	DR020140
IBF Channel No. 15	1000	200	100	320/330	270/280	85	DR020150
IBF Channel No. 16	1000	200	100	330/340	280	91	DR020160
IBF Channel No. 17	1000	200	100	340/350	340/350	93.5	DR020170
IBF Channel No. 18	1000	200	100	360/370	360/370	96	DR020180
IBF Channel No. 19	1000	200	100	350/360	350/360	98.5	DR020190
IBF Channel No. 20	1000	200	100	370/380	370/380	101	DR020200

Inbuilt Fall

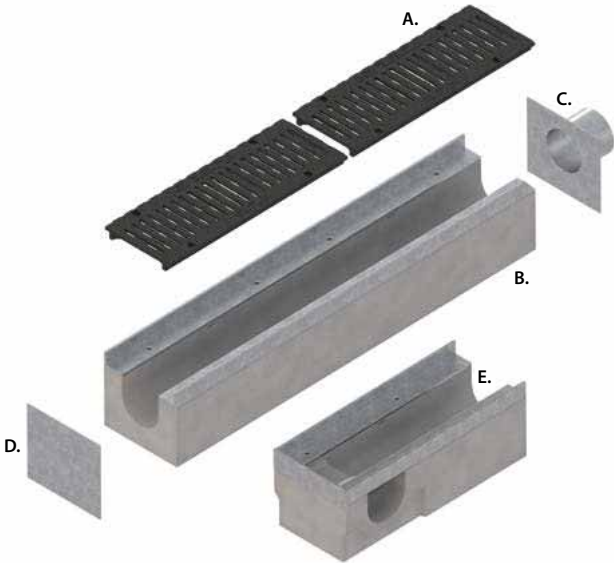


Birco 100 Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

T Junction Channels	Unit Weight (kg)	Item Code
T- Channel 0/0	27	DR010210
T- Channel 5/0	33	DR010220
T- Channel 10/0	39	DR010230

Birco 100 with reference numbers indicated in **bold** black are available ex-stock. Birco 100 with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

Channel Accessories	Unit Weight (kg)	Item Code
100 End Cap 0/0	1	DR045150
100 End Cap 5/0	1.2	DR045155
100 End Cap 10/0	1.4	DR045160
100 End Cap 15/0	1.6	DR045165
100 End Cap 20/0	1.8	DR045170
Cap Outlet 0/0	1	DR045175
Cap Outlet 5/0	1.2	DR045180
Cap Outlet 10/0	1.4	DR045185
Cap Outlet 15/0	1.6	DR045190
Cap Outlet 20/0	1.8	DR045195
100 End Outfall 100mm	105	DR130170
100 Side Outfall 150mm	142	DR130175



- A. Top Grate
- B. Channel
- C. Cap Outlet
- D. End Cap
- E. T-Junction Channel



Birco 100, Bargoed



Birco Shallow

Gratings	Loading	Length (mm)	Width (mm)	Unit Weight (kg)	Item Code
Birco 100 Slotted Cast Iron	C250	500	200	5.0	DR115120
Birco 100 13mm Diagonal Cast Iron	C250	500	200	5.65	DR115020
Birco 100 30 x 12mm Mesh Galvanised Steel	C250	500	200	3.31	DR115275
Birco 100 30 x 30mm Mesh Gakvanised Steel	E600	500	200	2.67	DR115260
Birco 100 12mm Slotted Cast Irion	E600	500	200	6.2	DR115125
Birco 100 Heelsure Cast Iron	E600	500	200	7.2	DR115135
Birco 100 20 x 30mm Mesh Galvanised Steel	E600	500	200	4.86	DR115285
Birco 100 Cast Iron Solid Cover	E600	500	200	7.46	DR115250
Birco 100 12mm Slotted Cast iron	F900	500	200	7.4	DR115130
Birco 150 Ellipse Cast Iron	E600	500	250	9.7	DR195020
Birco 300 20mm Slotted Cast Iron	E600	500	430	20.20	DR390620
Birco 300 20mm Slotted Cast Iron	F900	500	430	24.7	DR390630

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Channel Item Code
100 Shallow	1000	200	100	80	20	DR420450
	1000	200	100	100	40	DR420460
	1000	200	100	150	80	DR420480
	1000	200	100	200	130	DR420490
150 Shallow	1000	250	150	120	50	DR430460
	1000	250	150	150	80	DR430470
	1000	250	150	200	130	DR430480
300 Shallow	1000	430	300	300	180	DR420490

Birco Shallow with reference numbers indicated in **bold** black are available ex-stock. Birco Shallow with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

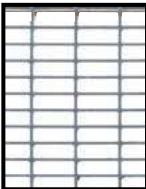
Channel Accessories	Weight (kg)	Item Code
Outfalls Birco Lite, 100 In-Line trap (for 100mm dia pipe)	101	DR420450
Birco Lite 150, Side trap (for 150mm dia pipe)	137	DR420460
Outfalls Birco 100, 100 In-Line trap (for 100mm dia pipe)	105	DR420480
Outfalls Birco 300, 300 _{AS} Outfall	225	DR450490
Outfalls Birco System, Junction/Outfall 150 (for 150mm dia pipe)	340	DR460400
Birco System, Junction/Outfall 225 (for 225mm dia pipe)	305	DR460405
Outfalls Birco System, Junction/Outfall 150 (for 150mm dia pipe)	340	DR460400
100 Shallow End Cap 80 - 100	0.02	DR425150
100 Shallow End Cap 150 - 200	0.03	DR425160
150 Shallow End Cap 120 - 150	0.03	DR435250
Outfalls Birco System, Junction/Outfall 150 (for 150mm dia pipe)	340	DR460400



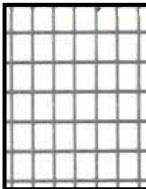
Birco 100 Slotted Cast Iron



Birco 100 13mm Diagonal Cast Iron



Birco 100 30 x 12mm Mesh Galvanised Steel



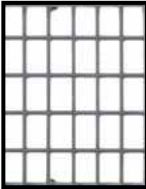
Birco 100 30 x 30mm Mesh Galvanised Steel



Birco 100 12mm Slotted Cast Iron



Birco 100 Heelsure Cast Iron



Birco 100 20 x 30mm Mesh Galvanised Steel



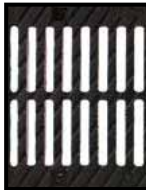
Birco 100 Cast Iron Solid Cover



Birco 100 12mm Slotted Cast Iron



Birco 150 Ellipse Cast Iron



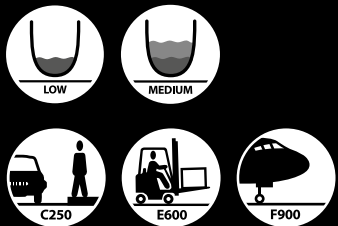
Birco 300 20mm Slotted Cast Iron



Birco 300 20mm Slotted Cast Iron

Birco Shallow

Grid Drainage System



A low to medium capacity system and the perfect solution where excavation depths are limited. Available across a variety of cast iron, stainless steel or galvanised grates offering both aesthetic and loading choice. Supported by a comprehensive range of accessories and ancillary units making Birco Shallow ideal for civic, commercial and rail applications.

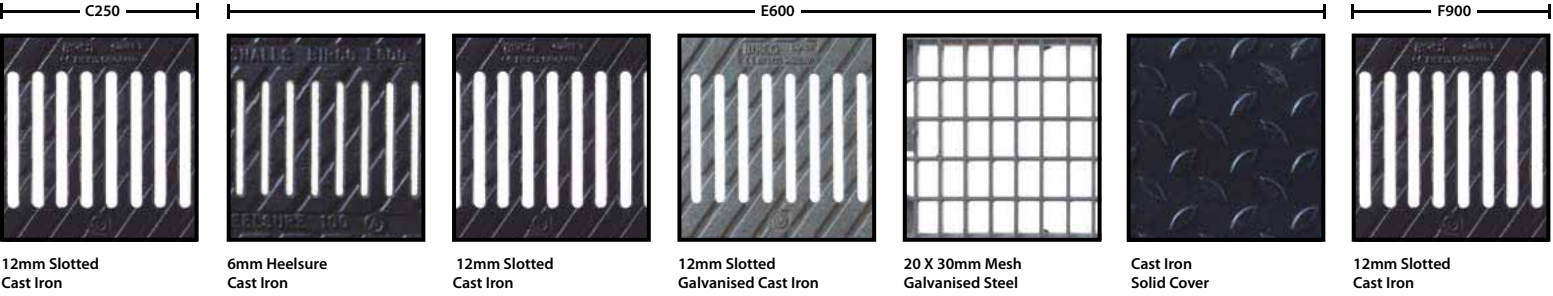
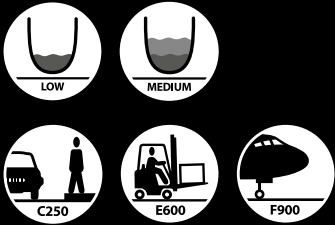
nssPlus
Q10 180

kg
CO₂ per m²

For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator



Birco 150
Grid Drainage System



A medium capacity linear drainage system which combines a robust concrete channel with a wide aesthetic choice of cast iron and galvanised steel grates. Birco 150 is available up to the highest loading classification making it suitable for a variety of commercial, rail and industrial applications.

Gratings	Loading	Length (mm)	Width (mm)	Unit Weight (kg)	Item Code
12mm Slotted Cast Iron	C250	500	250	9.3	DR195200
6mm Heelsure Cast Iron	E600	500	250	10.5	DR195240
12mm Slotted Cast Iron	E600	500	250	11.0	DR195210
12mm Slotted Galvanised Cast Iron	E600	500	250	11	DR197030
20 x 30mm Mesh Galvanised Steel	E600	500	250	7.36	DR197290
Cast Iron Solid Cover	E600	500	250	10.3	DR195230
12mm Slotted Cast Iron	F900	500	250	12.20	DR195220

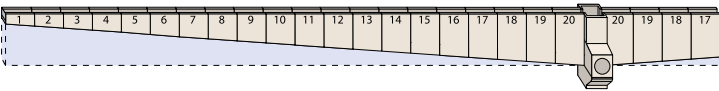


Birco 150, Towcester

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	250	150	230	150	76	DR160200
Channel 5/0	1000	250	150	280	200	88	DR160205
Channel 10/0	1000	250	150	330	250	100	DR160210
Channel 15/0	1000	250	150	380	300	112	DR160215
Channel 20/0	1000	250	150	430	350	124	DR160220
Channel 0/0	500	250	150	230	150	38	DR170206
Channel 5/0	500	250	150	280	200	44	DR170226
Channel 10/0	500	250	150	330	250	50	DR170236
Channel 15/0	500	250	150	380	300	45	DR170246

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	250	150	150/160	230/240	76	DR180010
IBF Channel No. 2	1000	250	150	160/170	240/250	77	DR180020
IBF Channel No. 3	1000	250	150	170/180	250/260	77	DR180030
IBF Channel No. 4	1000	250	150	180/190	260/270	79	DR180040
IBF Channel No. 5	1000	250	150	190/200	270/280	80	DR180050
IBF Channel No. 6	1000	250	150	200/210	280/290	81	DR180060
IBF Channel No. 7	1000	250	150	210/220	290/300	82	DR180070
IBF Channel No. 8	1000	250	150	220/230	300/310	83	DR180080
IBF Channel No. 9	1000	250	150	230/240	310/320	84	DR180090
IBF Channel No. 10	1000	250	150	240/250	320/330	85	DR180100
IBF Channel No. 11	1000	250	150	250/260	330/340	86	DR180110
IBF Channel No. 12	1000	250	150	260/270	340/350	87	DR180120
IBF Channel No. 13	1000	250	150	270/280	350/360	88	DR180130
IBF Channel No. 14	1000	250	150	280/290	360/370	89	DR180140
IBF Channel No. 15	1000	250	150	290/300	370/380	90	DR180150
IBF Channel No. 16	1000	250	150	300/310	380/390	91	DR180160
IBF Channel No. 17	1000	250	150	310/320	390/400	92	DR180170
IBF Channel No. 18	1000	250	150	320/330	400/410	93	DR180180
IBF Channel No. 19	1000	250	150	330/340	410/420	94	DR180190
IBF Channel No. 20	1000	250	150	340/350	420/430	95	DR180200

Inbuilt Fall

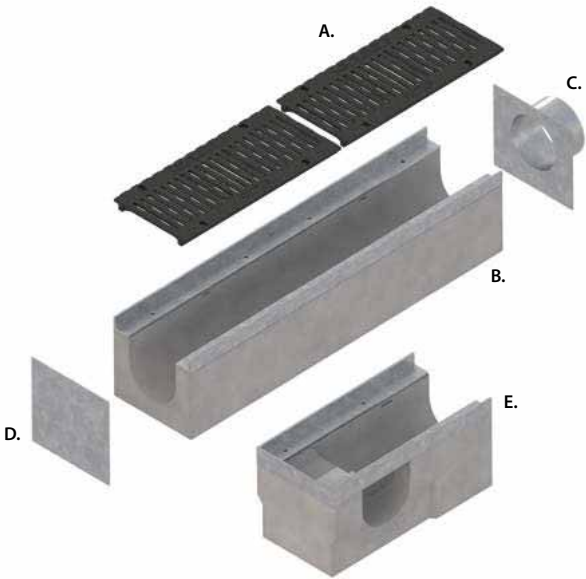


Birco 150 Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

T-Junction Channels	Unit Weight (kg)	Item Code
T-Channel 0/0	38	DR190020
T-Channel 5/0	44	DR190030

Birco 150 with reference numbers indicated in **bold** black are available ex-stock. Birco 150 with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

Channel Accessories	Unit Weight (kg)	Item Code
150 End Cap 0/0	1	DR197200
150 End Cap 5/0	1.2	DR197210
150 End Cap 10/0	1.4	DR197220
150 End Cap 15/0	1.6	DR197230
150 Cap Outlet 0/0	2	DR200250
150 Cap Outlet 5/0	2	DR200260
150 Cap Outlet 10/0	2	DR200270
150 Cap Outlet 15/0	2	DR200280
150 End Outfall 100mm	140	DR210270
150 Side Outfall 150mm	158	DR210280



- A. Top Grate
- B. Channel
- C. Cap Outlet
- D. End Cap
- E. T-Junction Channel

Top Unit	Loading	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
Traffic Drain Cast Iron	F900	500	250	110	23	DR695020

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
210 Press Chan	1000	280	150	210	110	102	DR696010
260 Press Chan	1000	280	150	260	160	109	DR697010
310 Press Chan	1000	280	150	310	210	122	DR698010
360 Press Chan	1000	280	150	360	260	144	DR699010
210 Press Chan	500	280	150	210	110	51	DR696020
260 Press Chan	500	280	150	260	160	55	DR697020
310 Press Chan	500	280	150	31	210	61	DR698020
360 Press Chan	500	280	150	360	260	77	DR699020

Base Transitions	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
210 - 260	1000	280	150	210/260	110/160	54	DR696330
260 - 310	1000	280	150	260/310	160/310	61	DR697330
310 - 360	1000	280	150	310/360	310/360	77	DR698330

Access Cover	Unit Weight (kg)	Item Code
Traffic Drain Cast Iron Access C&F	34	DR695010

Cover Plates	Unit Weight (kg)	Item Code
Traffic Drain Cover Plate 500	6	DR691030
Traffic Drain Cover Plate 1000	12	DR691040
Traffic Drain Cover Plate 30/10	6	DR691050
Traffic Drain Cover Plate 9/6	6	DR691060

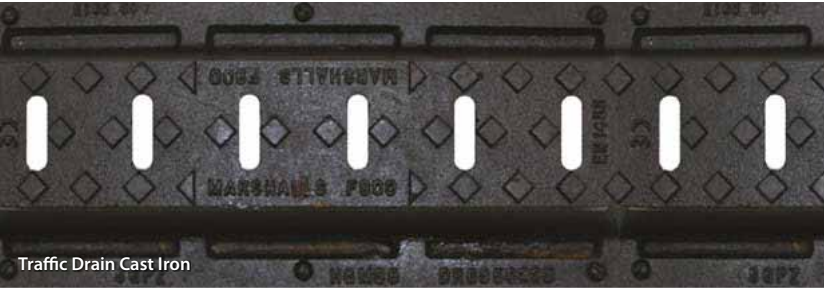
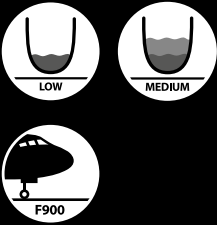
Traffic Drain with reference numbers indicated in **bold** black are available ex-stock. Traffic Drain with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

Channel Accessories	Unit Weight (kg)	Item Code
210 End Cap	1	DR696310
260 End Cap	1	DR697310
310 End Cap	1	DR698310
360 End Cap	1	DR699310
210 Cap Outlet	2	DR696320
260 Cap Outlet	2	DR697320
310 Cap Outlet	2	DR698320
360 Cap Outlet	3	DR699320
Inline Side Outfall	150	DR689000
Inline End Outfall	142	DR689010
Slit Box	72	DR689910

Radial Base Channels	Unit Weight (kg)	Item Code
210 Base 30/10	51	DR696110
210 Base 9/6	51	DR696120
260 Base 30/10	55	DR697110
260 Base 9/6	55	DR697120
310 Base 30/10	61	DR698110
310 Base 9/6	61	DR698120
360 Base 30/10	77	DR699110
360 Base 9/6	77	DR699120

Traffic Drain

Grid Drainage System



Traffic Drain is a medium capacity system that complements the Mini Beany range to provide continuity of flow between kerb and grate units. The robust concrete channel and strong cast iron grates are suitable to withstand fast moving vehicles and heavy loading highway applications. Traffic Drain is fully compatible with the full range of Mini Beany junctions, outfalls and other ancillary units.

See my related products...
Mini Beany Water Management..... pg 164-166



Traffic Drain, Bedford



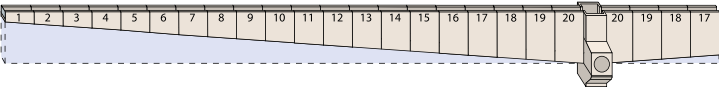
Birco 200, Gloucestershire

Tops - Gratings	Loading	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
18mm Slotted Cast Iron	E600	520	330	35	12.5	DR275410

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	330	200	310	205	142	DR240300
Channel 5/0	1000	330	200	335	230	140	DR240310
Channel 10/0	1000	330	200	360	255	147.5	DR240320
Channel 15/0	1000	330	200	385	280	153	DR240330
Channel 0/0	500	330	200	310	205	71	DR250310

Inbuilt Fall Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
IBF Channel No. 1	1000	330	200	310/315	205/210	136	DR260010
IBF Channel No. 2	1000	330	200	315/320	210/215	136	DR260020
IBF Channel No. 3	1000	330	200	320/325	215/220	136	DR260030
IBF Channel No. 4	1000	330	200	325/330	220/225	136	DR260040
IBF Channel No. 5	1000	330	200	330/335	225/230	136	DR260050
IBF Channel No. 6	1000	330	200	335/340	230/235	141	DR260060
IBF Channel No. 7	1000	330	200	340/345	235/240	141	DR260070
IBF Channel No. 8	1000	330	200	345/350	240/245	141	DR260080
IBF Channel No. 9	1000	330	200	350/355	245/250	141	DR260090
IBF Channel No. 10	1000	330	200	355/360	250/255	147	DR260100
IBF Channel No. 11	1000	330	200	360/365	255/260	147	DR260110
IBF Channel No. 12	1000	330	200	365/370	260/265	147	DR260120
IBF Channel No. 13	1000	330	200	370/375	265/270	147	DR260130
IBF Channel No. 14	1000	330	200	375/380	270/275	147	DR260140
IBF Channel No. 15	1000	330	200	380/385	275/280	147	DR260150
IBF Channel No. 16	1000	330	200	385/390	280/285	153	DR260160
IBF Channel No. 17	1000	330	200	390/395	285/290	153	DR260170

Inbuilt Fall

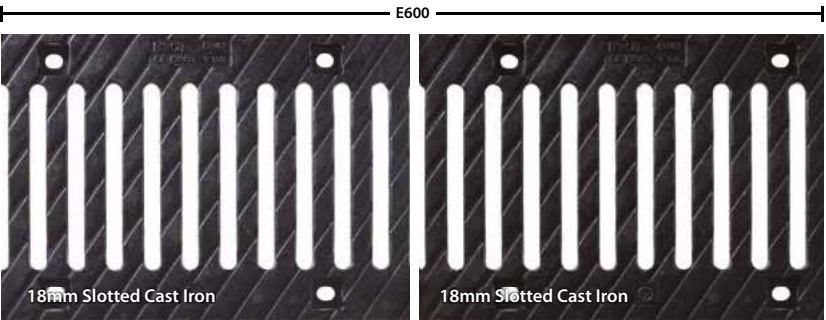


Birco 200 Channels are available with inbuilt falls. Inbuilt Fall Channels increase drainage discharge capacity by improving flow rates and thereby increasing the overall discharge capacity of the system. Inbuilt fall channels are 1000mm long.

Channel Accessories	Unit Weight (kg)	Item Code
200 End Cap	2	DR280350
200 Cap Outlet	2.5	DR280370
200 Outfall 150mm Side	186	DR290380

T - Junction Channels	Unit Weight (kg)	Item Code
T-Channel 0/0	69	DR250320

Birco 200 with reference numbers indicated in **bold** black are available ex-stock. Birco 200 with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



Birco 200

Grid Drainage System






A medium to high capacity linear drainage system which combines a robust concrete channel with a cast iron slotted grate. Suitable for loadings up to E600, making Birco 200 ideal for projects where vehicles impose particularly heavy wheel loads such as industrial applications.

n55Plus

Q10 115
Q10 180



For the latest carbon value visit
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Gratings	Loading	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
20mm Slotted Cast Iron	E600	500	417	45	20.20	DR390620
20mm Slotted Cast Iron	F900	500	417	45	24.7	DR390630

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 0/0	1000	430	300	410	290	228	DR380500
Channel 5/0	1000	430	300	550	430	228	DR380520

Channel Accessories	Unit Weight (kg)	Item Code
300 AS End Cap	2.5	DR395530
300 AS Cap Outlet	3	DR395540
300 _{AS} Outfall	220	DR395550

Birco 300 with reference numbers indicated in **bold** black are available ex-stock. Birco 300 with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.

Birco 300

Grid Drainage System

E600

F900

20mm Slotted Cast Iron

20mm Slotted Cast Iron

A high capacity linear drainage system which combines a robust concrete channel with a cast iron slotted grate. Suitable for loadings up to F900, Birco 300 is suitable for special projects with abnormally heavy wheel loads such as ports and aircraft pavements.

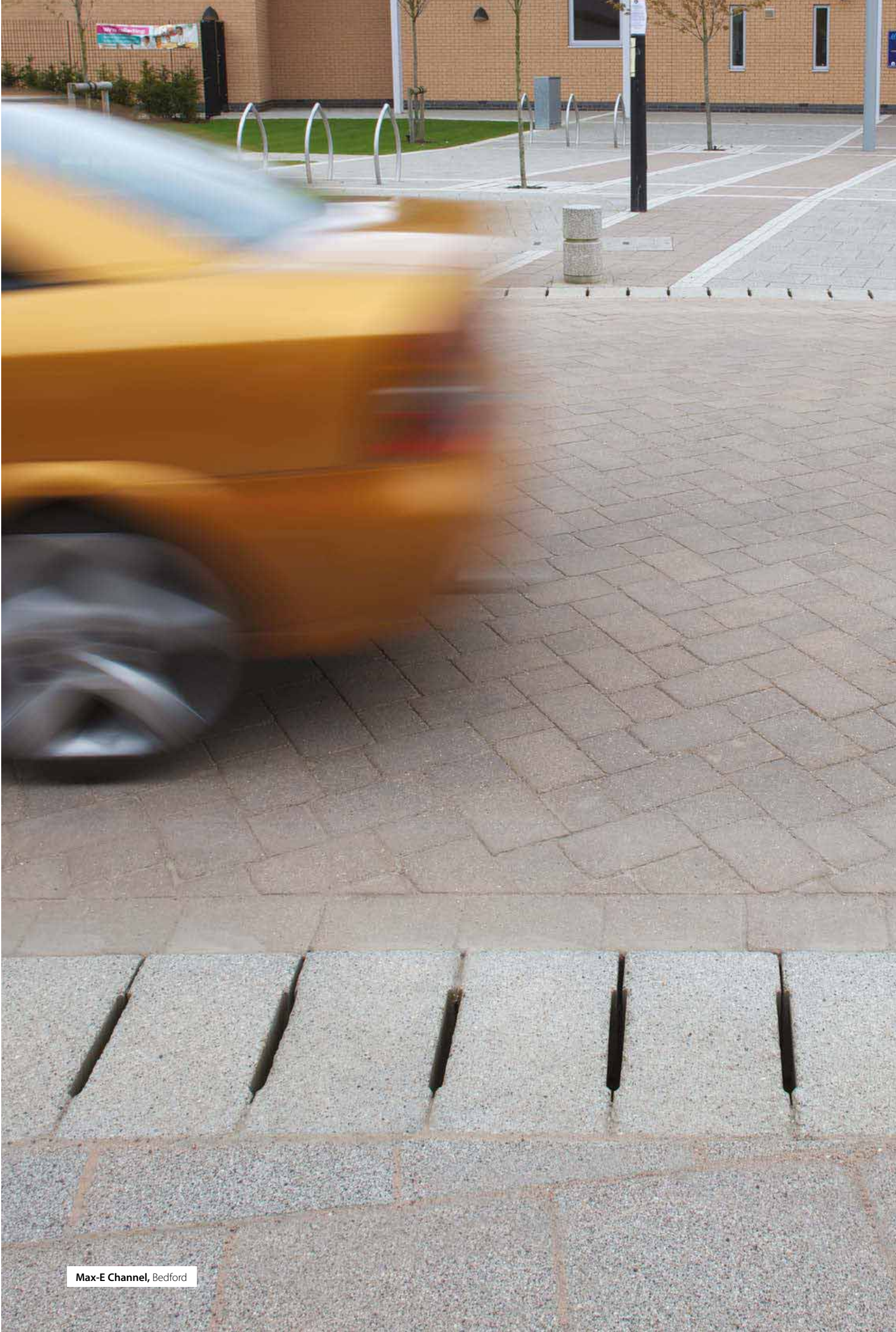
nssPlus

Q10 115
Q10 180

For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator



Birco 300, Ingolstadt



Max-E Channel, Bedford

Top Units	Loading	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
Cast Iron Grate	F	500	430	165	62	DR975020
Standard Grey Concrete Top	C	250	430	170	40	DR975800
Standard Grey Reinforced Concrete Top	E	250	430	170	39	DR975810
Conservation Reinforced Top	E	250	430	170	36	DR975830

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
Channel 205	500	430	280	205	100	70	DR720021
Channel 295	500	430	280	295	170	85	DR720010
Channel 365	500	430	280	365	240	96	DR720030
Channel 630	500	430	280/360	630	520	81.2	DR720045

Base Transitions	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
205 - 295	500	430	280	205/295	100/170	100	DR870010
295 - 365	500	430	280	295/365	170/240	87	DR870021

Channel Accessories	Unit Weight (kg)	Item Code
Max-E Full Depth Access Cover & Frame	85	DR980015
Max-E Inlaid Access Cover & Frame	32.5	DR980017
Gully Outfall 225	242	DR460406
Gully Outfall 150	277	DR460401
205 Base End Cap	2.2	DR720025
295 Base End Cap	3	DR720015
365 Base End Cap	3.8	DR720035

Max-E-Channel with reference numbers indicated in **bold** black are available ex-stock. Max-E-Channel with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



Conservation
Silver Grey



Standard Grey &
Reinforced Standard Grey



Cast Iron

Max-E Channel

Slot Drainage System

See my related products...

Beany Block Water Management pg 167-169

Max-E Channel is a high capacity system that complements the Beany range to ensure continuity between kerb and top units. The range of different concrete top units offered in a variety of colours and finishes complements any aesthetic. A cast iron top option completes the range and provides a solution for the highest loading classification. Max-E Channel is fully compatible with the full range of Beany junctions, outfalls and other ancillary units.

n55Plus
Q10 170

CO₂ per m²

For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator

Top Units	Loading	Length (mm)	Width (mm)	Depth (mm)	Unit Weight (kg)	Item Code
Perforated Lid 150	D400	1000	250	625	103	DR531210
Perforated Lid 250	D400	1000	354	765	171	DR531220
Perforated Lid 375	D400	1000	480	885	226	DR531230
Perforated Lid 525	D400	1000	640	1065	260	DR531240
Perforated Lid 600	D400	1000	720	1175	280	DR531250
Heelguard Lid 150	C250	1000	250	655	110	DR531010
Heelguard Lid 250	C250	1000	354	795	135	DR531020
Heelguard Lid 375	C250	1000	480	915	176	DR531030
Heelguard Lid 525	C250	1000	640	1145	322	DR531040
Heelguard Lid 600	C250	1000	720	1255	374	DR531050
In-Situ Lid 150 + Cage	D400	500	250	460	11	DR530550
In-Situ Lid 250 + Cage	D400	500	354	600	14	DR530560
In-Situ Lid 375 + Cage	D400	500	480	720	18	DR530570
In-Situ Lid 525 + Cage	D400	500	640	900	23	DR530580
In-Situ Lid 600 + Cage	D400	500	720	1010	27	DR530590

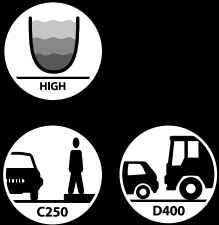
Base Channel	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
150 Channel	2000	250	150	460	424	65	DR530050
250 Channel	2000	350	250	600	530	81	DR530060
375 Channel	1500	475	375	720	650	89	DR530070
525 Channel	1200	650	525	900	830	100	DR530080
600 Channel	1000	720	600	1010	945	120	DR530090

Channel Accessories	Unit Weight (kg)	Item Code
Large Manhole Cover & Frame	20	DR535520
Small Manhole Cover & Frame	20	DR535530
Large Silt Box	20	DR535525
Small Silt Box	20	DR535535
Bedding Mortar		DR535500
Stop End 150mm	3	DR535650
Stop End 250mm	6	DR535660
Stop End 375mm	11.6	DR535670
Stop End 525mm	19.5	DR535680
Stop End 600mm	25.5	DR535690

Decathlon with reference numbers indicated in **bold** black are available ex-stock.
Decathlon with reference numbers indicated in light are manufactured to order.
Contact our sales office to discuss your requirements.

Decathlon

Slot Drainage System



Concrete Filled
In - Situ Lid



Heelguard Top



Perforated Top Standard Grey

For over 30 years Decathlon has been the highest capacity drainage system in the UK. The Glass Reinforced Concrete channel, developed in association with the University of Sheffield, is ideally suited for high capacity heavy duty projects from busy service yards and rail ports with severe dynamic transport loading to motorways and commercial outlets due to Decathlon's range of tops.

Heelguard tops – suitable for pedestrian areas

Perforated Tops – suitable for industrial sites

In-Situ Lids – can be filled with concrete or any hardwearing material to suit the aesthetics of the location

By reducing the run size or the number of runs Decathlon is a cost effective solution. Sufficient flow velocities can be achieved at a low gradient thus providing self cleaning and minimal maintenance benefits.



n55Plus
Q10 170



For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator

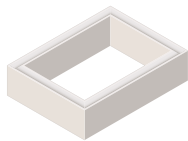


Decathlon, Northfleet

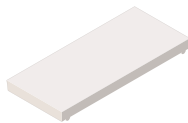


Household Inspection Chamber

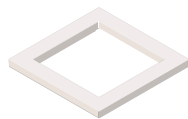
CHAMBER SECTION
A150



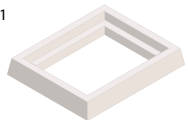
REDUCER AND CLOSER SLAB
BAR



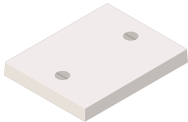
COVER SLAB
BCS



FRAME
F1



COVER
HC1



Marshalls Type	Type	Depth (mm)	Internal Length (mm)	Internal Width (mm)	Wall Thickness (mm)	Approx Weight (kg)	Pack Size (units)	Item Code
A150	A	150	600	450	50	44	16	DR620020
A225	A	225	600	450	50	58	10	DR620033
B150	B	150	750	600	60	67	16	DR620060
B225	B	225	750	600	60	100	10	DR620080
C150	C	150	1000	675	65	83	16	DR620090
D150	D	150	1200	750	75	115	8	DR620111
D225	D	225	1200	750	75	173	5	DR620126

Marshalls Type	Type	Overall Size (mm)	Internal Dimensions Reduce from (mm)	Internal Dimensions Reduce to (mm)	Depth (mm)	Approx Weight (kg)	Pack Size (units)	Item Code
BAR	B to A Reducer	730 x 315	750 x 600	600 x 450	50	26	6	DR6300100
DBR	D to B Reducer	910 x 620	1200 x 750	750 x 600	75	97	6	DR6300400

Marshalls Type	Type	Clear Opening (mm)	Length (mm)	Width (mm)	Thickness (mm)	Approx Weight (kg)	Pack Size (units)	Item Code
BSC	For B Section	605 x 605	870	870	70	55	1	DR635140
CCS	For C Section	605 x 455	1150	825	60	89	1	DR635150
DCS	For D Section	610 x 610	1366	916	90	150	1	DR635180
SDCS	For D Section	610 x 610	1380	930	150	300	1	DR635170

Marshalls Type	Type	Length (mm)	Width (mm)	Thickness (mm)	Approx Weight (kg)	Pack Size (units)	Item Code
F1	Standard Frame	850	700	123	46	1	DR635010
F2	Standard Frame	865	865	138	80	1	DR635070

Marshalls Type	Type	Clear Opening (mm)	Length (mm)	Width (mm)	Thickness (mm)	Approx Weight (kg)	Pack Size (units)	Item Code
HC1	Handhole	600 x 450	700	545	60	55	1	DR635100
KC1	Keyhole	600 x 450	700	545	60	55	1	DR635110
HC2	Handhole	600 x 600	695	695	75	93	1	DR630060
KC2	Keyhole	600 x 600	695	695	75	93	1	DR630070



Standard Grey

Household Inspection Chambers



A range of 4 sizes of inspection chamber to suit specific site requirements comprising a complete system of interchangeable units.

Different depths of tongue and groove chamber sections allow you to build up easily and accurately to the appropriate depth to suit the location of the pipework.

Flexible internal chamber configurations are achieved using Reducer and Closer Units and one piece Cover Slabs.

Fitted Concrete Frames and removable Concrete Covers seal the Inspection Chamber.

System uses sulphate resistant cement Compliant to BS EN 1917:2002

n55Plus
Q25 800
Q10 190

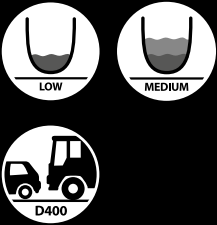

kg
CO₂ per m²

For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator



Mono Beany®

One Piece Combined Kerb and Drainage System



Standard Grey

Mono Beany, A21, East Sussex

An innovative, concrete single piece combined kerb and drainage solution. Mono Beany is a low to medium capacity system which combines strength and aesthetics through Marshalls' high strength M-Tech concrete. A recycled inner plastic core provides hydraulic flow benefits at low capacities. Available in two depths and in both Half Battered and 45° Splayed profiles with a range of accessories to provide a comprehensive drainage system which carries the BSI Kitemark.

nssPlus
Q10 190



For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator

Profile	Length (mm)	Width (mm)	Height (mm)	Unit Weight (kg)	Item Code
Half Battered	1000	150	321	69	DR663030
	500	150	321	34.5	DR663035
	1000	150	502	91	DR663040
	500	150	502	45.5	DR663045
45° Splayed	1000	150	321	64	DR663120
	500	150	321	32	DR663125
	1000	150	502	86	DR663130
	500	150	502	43	DR663135



Mono Beany, A259

Profile		Length (mm)	Width (mm)	Height (mm)	Depth (mm)	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
Half Battered	Centre Stone 321	1000	150	202			40	DR663110
	Centre Stone 502	1000	150	383			50	DR663115
	Right Hand 321	1000	150	321			50	DR663090
	Right Hand 502	1000	150	502			60	DR663095
	Left Hand 321	1000	150	321			50	DR663100
	Left Hand 502	1000	150	502			60	DR663105
	5/9 Internal Radius 321	490	150	321			20	DR663050
	5/9 Internal Radius 502	490	150	502			30	DR663060
	5/9 External Radius 321	490	150	321			20	DR663070
	5/9 External Radius 502	490	150	502			30	DR663080
	20/10 Internal Radius 321	490	150	321			20	DR663055
	20/10 Internal Radius 502	490	150	502			30	DR663065
	20/10 External Radius 321	490	150	321			20	DR663075
	20/10 External Radius 502	490	150	502			30	DR663085
	502 - 321 Transition RH	1000	150	502		221/402	107	DR663320
	503 - 321 Transition LH	1000	150	502		221/403	107	DR663321
45° Splayed	5/9 Internal Radius 321	490	150	321			20	DR663140
	5/9 Internal Radius 502	490	150	502			30	DR663150
	5/9 External Radius 321	490	150	321			20	DR663160
	5/9 External Radius 502	490	150	502			30	DR663170
	20/10 Internal Radius 321	490	150	321			20	DR663145
	20/10 Internal Radius 502	490	150	502			30	DR663155
	20/10 External Radius 321	490	150	321			20	DR663165
	20/10 External Radius 502	490	150	502			30	DR663175
	Centre Stone 321	1000	150	252	116		40	DR663310
	Centre Stone 502	1000	150	433	297		50	DR663315
	Right Hand 321	1000	150	252/321	116		50	DR663290
	Right Hand 502	1000	150	433/502	297		60	DR663295
	Left Hand 321	1000	150	252/321	116		50	DR663300
	Left Hand 502	1000	150	433/502	297		60	DR663305
	503 - 321 Transition RH	1000	150	502		221/403	107	DR663326
	502 - 321 Transition LH	1000	150	502	297	221/402	107	DR663305

Channel Accesories	Unit Weight (kg)	Item Code
End Cap for 321 System	1	DR664235
End Cap for 502 System	1	DR664240
Cap Outlet for 321 System	1	DR664225
Cap Outlet for 502 System	1	DR664230
Inline Slide Outfall	80	DR664180
Half Battered Access Cover	40	DR664010
45° Splayed Access Cover	40	DR664020
Rodding Box for 321 System	20	DR664185
Rodding Box for 502 System	30	DR664190

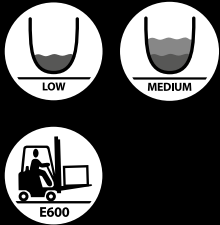
Mono Beany with reference numbers indicated in **bold** black are available ex-stock. Mono Beany with reference numbers indicated in light are manufactured to order. Contact our sales office to discuss your requirements.



- A. Mono Beany Unit
- B. Internal Plastic Linear
- C. Divergent Apertures



Mini Beany®
Combined Kerb
and Drainage System



Conservation Silver Grey



Standard Grey



Mini Beany, Conservation, Bedford

Mini Beany is a low to medium capacity combined kerb and drainage system which evolved from the successful Beany range. The robust concrete construction makes this the ideal choice for areas of heavy or abnormally heavy wheel loads. Available in a choice of top finishes to complement a wide range of projects, from urban to rural.

See my related products...

Traffic Drain Water Management pg 156

Top Blocks	Length (mm)	Width (mm)	Height (mm)	Unit Weight (kg)	Item Code
HB standard Grey	1000	250	240	95	DR672010
HB standard Grey	500	250	240	43	DR672020
45° SP Standard Grey	1000	250	240	98	DR672040
45° SP Standard Grey	500	250	240	43	DR672050
Bull Nose Conservation	1000	250	240	139	DR931210
Bull Nose Conservation	500	250	240	69.5	DR931211



Mini Beany, Conservation, Bedford



Mini Beany, Amesbury



Mini Beany, A21



Mini Beany, Bedford



Mini Beany, A21



Mini Beany, Bargoed

Top Blocks	Length (mm)	Width (mm)	Height (mm)	Unit Weight (kg)	Item Code
Drop Kerb LH	1000	250	240/135	82	DR689920
Drop Kerb RH	1000	250	240/135	82	DR689930
Drop Kerb Centre Stone	1000	250	135	70	DR689940
Conservation Centre Stone	1000	250	135	70	DR931450

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
210 Press Chan	1000	280	150	210	110	102	DR696010
260 Press Chan	1000	280	150	260	160	109	DR697010
310 Press Chan	1000	280	150	310	210	122	DR698010
360 Press Chan	1000	280	150	360	160	144	DR699010
210 Press Chan	500	280	150	210	110	51	DR696020
260 Press Chan	500	280	150	260	160	55	DR697020
310 Press Chan	500	280	150	310	210	61	DR698020
360 Press Chan	500	280	150	360	260	77	DR699020

Base Transitions	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
210 - 260	1000	280	150	210/260	110/160	54	DR696330
260 - 310	1000	280	150	260/310	160/310	61	DR697330
310 - 360	1000	280	150	310/360	310/360	77	DR698330

Channel Accessories	Unit Weight (kg)	Item Code
210 End Cap	1	DR696310
260 End Cap	1	DR697310
310 End Cap	1	DR698310
360 End Cap	1	DR699310
210 Cap Outlet	2	DR696320
260 Cap Outlet	2	DR697320
310 Cap Outlet	2	DR698320
360 Cap Outlet	2	DR699320
Inline Side Outfall	150	DR689000
Inline End Outfall	142	DR689010
Slit Box	72	DR689910
Gully Outfall 150	277.25	DR460401
Gully Outfall 225	242.25	DR460406
Gully Outfall 150 Outlet	340.5	DR460400
Gully Outfall 225 Outlet	305.5	DR460405
HB Cable Duct Block	3	DR689900
45° SP Cable Duct Block	3	DR689905

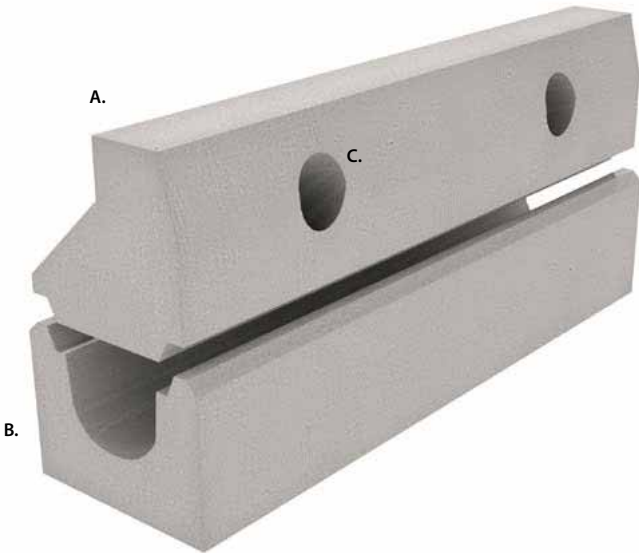
Radial Base Channels	Unit Weight (kg)	Item Code
210 Base 30/10	51	DR696110
210 Base 9/6	51	DR696120
260 Base 30/10	55	DR697110
260 Base 9/6	55	DR697120
310 Base 30/10	61	DR698110
310 Base 9/6	61	DR698120
360 Base 30/10	77	DR699110
360 Base 9/6	77	DR699120

Cover Plates	Unit Weight (kg)	Item Code
Cover Plate 500 mm	12	DR691030
Cover Plate 1000 mm	6	DR691040
Cover Plate 30/10	6	DR691050
Cover Plate 9/6	6	DR691060

Access Covers	Unit Weight (kg)	Item Code
HB Access Cover N/S	40	DR691010
45° SP Access Cover N/S	40	DR691015
HB Access Cover O/S	40	DR691020
45° SP Access Cover O/S	40	DR691025
Bull Nose Access Cover N/S	40	DR691027

Radial Tops	Unit Weight (kg)	Item Code
Mini Beany HB Cut 30/10 Ext Rad	44	DR672310
Mini Beany HB Cut 30/10 Int Rad	44	DR672311
Mini Beany HB Cut 9/6 Ext Rad	44	DR672320
Mini Beany HB Cut 9/6 Int Rad	44	DR672321
Mini Beany HB 9/6 Ext Cons Tex	35	DR931620
Mini Beany BN 9/6 Int Cons Tex	35	DR931230
Mini Beany BN 30/10 Ex Cons Tex	35	DR931215
Mini Beany BN 9/6 Ext Cons Tex	35	DR931225
Mini Beany 45deg Top 30/10 Ext	35	DR672110

Mini Beany with reference numbers indicated in **bold** black are available ex-stock.
Mini Beany with reference numbers indicated in light are manufactured to order.
Contact our sales office to discuss your requirements.



A. Mini Beany Top Unit

B. Base Channel

C. Divergent Aperture



Beany Block, Newcastle

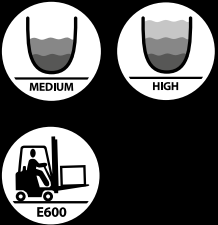


Conservation Silver Grey



Standard Grey

Beany[®]
Block
Combined Kerb
and Drainage System



Top Blocks	Length (mm)	Width (mm)	Height (mm)	Unit Weight (kg)	Item Code
HB Straight Back	500	430	295	71	DR700020
HB Straight Back Conservation	500	430	295	75	DR9300023
HB Straight Back Low Hole	500	430	295	71	DR700030
HB Symmetrical Low Hole	500	430	295	71	DR700035
HB Symmetrical	500	430	295	73	DR700010
45 Splayed Straight Back	500	430	295	76	DR700060

See my related products...

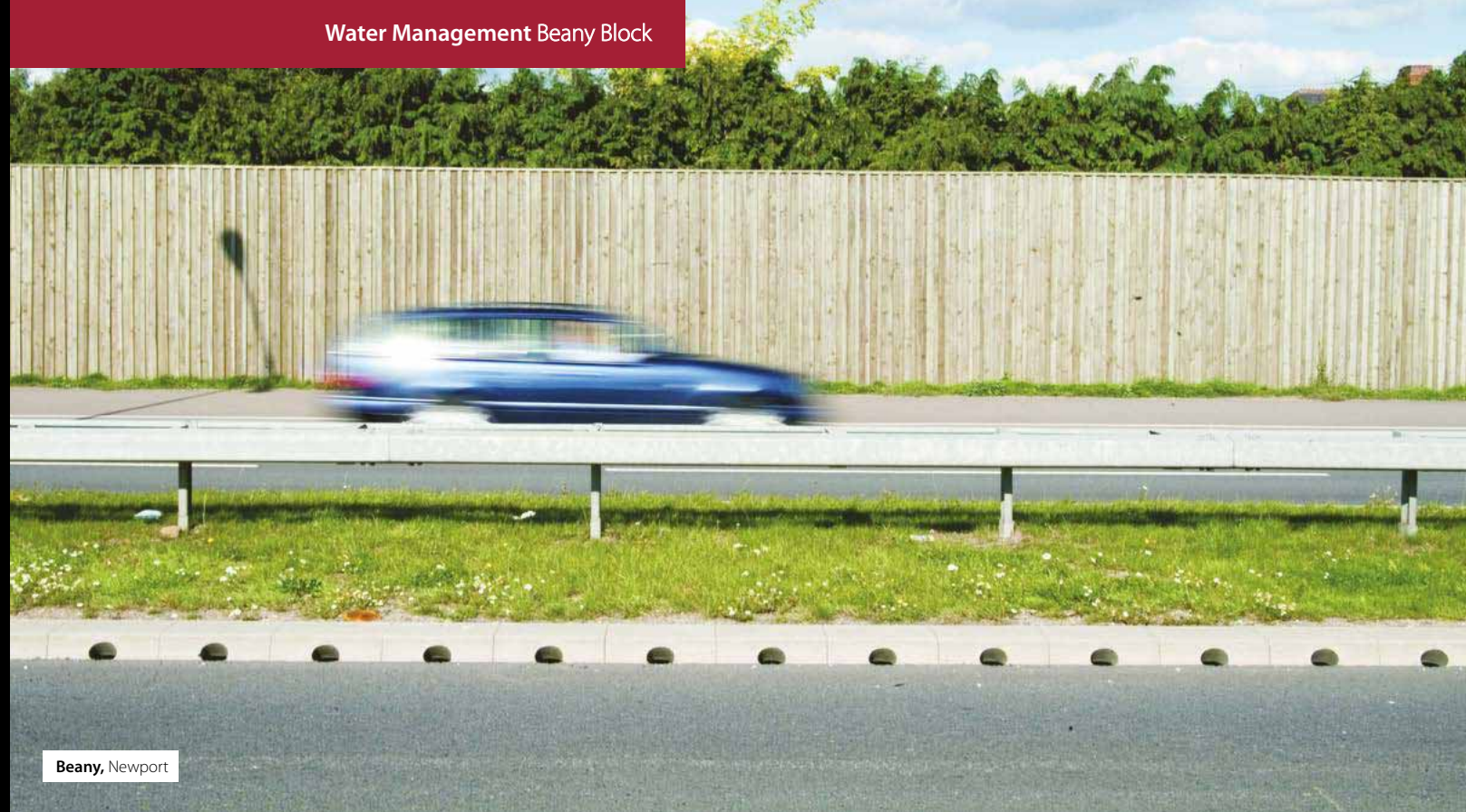
Max-E-Channel Water Management pg 159

The original and the largest combined kerb and drainage system on the market. Trusted and proven over more than 30 years with over 1 million linear meters installed and working. A two piece concrete system available in either standard or textured finishes combines the largest hydraulic capacity with the strongest loading classification. Supported by a range of accessories to deliver a flexible, versatile and aesthetically appealing solution for a variety of projects.

nssPlus
Q25 800
Q10 190



For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator



Beany, Newport



Beany, Newcastle



Beany, Fareham



Beany, Glasgow



Beany, Blackpool



Beany, Manchester



Beany Block, Gosport

Base Channels	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm)	Invert Depth (mm)	Unit Weight (kg)	Item Code
205 Press chan	500	430	280	205	100	70	DR720021
295 Press chan	500	430	280	295	170	85	DR720010
365 Press chan	500	430	280	365	240	96	DR720030
630 Press chan	500	430	280/360	630	520	110	DR720045

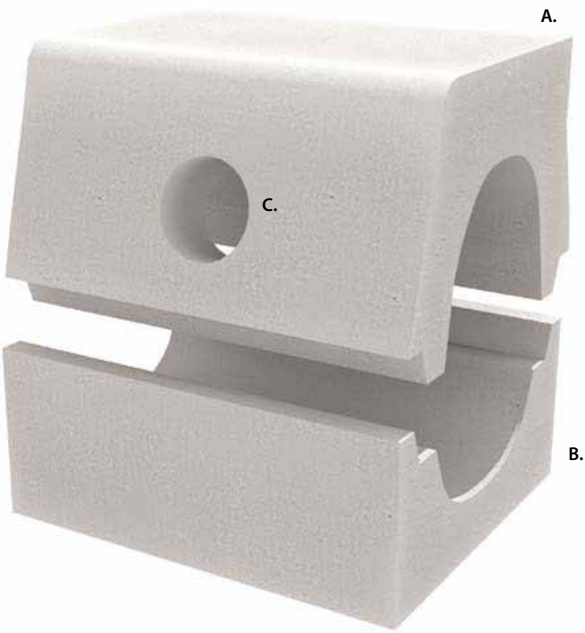
Base Transitions	Length (mm)	Width (mm)	Invert Width (mm)	Depth (mm) Upstream/Downstream	Invert Depth (mm) Upstream/Downstream	Unit Weight (kg)	Item Code
205 - 295	500	430	280	205/295	100/170	100	DR870010
295 - 365	500	430	280	295/365	170/240	87	DR870021

Channel Accesories	Unit Weight (kg)	Item Code
205 Base End Cap	2.2	DR720025
295 Base End Cap	3	DR720015
365 Base End Cap	3.8	DR720035
205 Base Outfall	87	DR850041
205 Base Junction	87	DR850051
295 Base Outfall	87	DR850010
295 Base Junction	87	DR850020
295 Base Outfall/Junction	87	DR850030
365 Base Outfall	87	DR850070
Gully Outfall 150	227	DR460401
Gully Outfall 225	242	DR460406
Cover Plate Standard	17	DR910005
Cover Plate Cut 50/11m	16	DR910010
Access Unit HB Universal	51	DR915017
Access 45 Sp Near Side	95	DR915020
Access 45 Splay Off Side	95	DR915025
Cable Duct Block HB	12	DR920040
Cable Duct Block Splay	12	DR920050
Stop End Top Block L/H	87	DR790010
Stop End Top Block R/H	87	DR790011

Water Management Beany Block

Radial Tops	Unit Weight (kg)	Item Code
HB 50/20m Ext	71	DR730020
HB 19/11m Ext	71	DR730030
HB Cut 10/8m Ext	71	DR730040
HB Cut 50/20m Int	71	DR730210
HB Cut 19/11m Int	71	DR730230
HB St Back 50/20m Ext	69	DR740020
HB St Back 19/11m Ext	69	DR740030
HB St Back Cut 10/8m Ext	69	DR740040
HB St Back Cut 7/6m Ext	69	DR740050
HB St Back Cut 50/20 Int	69	DR740210
HB St Back Cut 19/11 Int	69	DR740230
HB St Back 90degree Corner Int	174	DR895250
HB St Back 90degree Corner Ext	174	DR895255
HB St Back 45degree Corner Int	174	DR895500
HB St Back 45degree Corner Ext	174	DR895505
45° SP Str Bk Cut 50/20 Int	76	DR751009
45° SP Str Bk Cut 50/20 Ext	76	DR751010
45° SP Str Bk Cut 19/11 Ext	76	DR751031
45° SP Str Bk Cut 10/8 Ext	76	DR751040

Radial Base Channels	Unit Weight (kg)	Item Code
205 Base 50/20m	69	DR808010
205 Base 19/11m	69	DR808030
205 Base 10/8m Cut	69	DR808040
205 Base 7/6m Cut	69	DR808040
205 Base 45degree External Corner	174	DR900210
295 Base 50/20m	79	DR800020
295 Base 19/11m	79	DR800030
295 Base 10/8m Cut	79	DR800040
295 Base 7/6m Cut	79	DR800050
365 Base 50/20m Cut	95	DR820010
365 Base 19/11m Cut	95	DR820030
365 Base 10/8m Cut	95	DR820040
630 Base 50/20m	105	DR825020



A. Beany Block Top

B. Base Channel

C. Divergent Aperture