LIBERTY DRAIN™
Linear Channel Drainage



Peter Savage is now EJ

Over our 40 year history Peter Savage Ltd has grown to become one of the leading manufacturers and suppliers of access covers and drainage gratings in the UK, offering the UK's Largest Range.

In 2015 Peter Savage Ltd was purchased by EJ. As part of EJ, Peter Savage Ltd joined a global enterprise with a presence on five continents including sales and distribution offices, best-in-class manufacturing facilities and R&D centres.

In July 2017 Peter Savage Ltd became EJ.

The EJ legacy dates back to 1883 when William E. Malpass and his father-in-law Richard W. Round established a foundry on the shores of Lake Charlevoix, in the town of East Jordan, Michigan, USA.

130 years later EJ is still a family owned business with safety and environmental considerations at the core of the manufacturing process. Our commitment to you is that we will continue to create innovative customer-orientated solutions that improve people's lives.
We will do that in ways that are smarter, greener and safer than ever before.

We will still be offering the unrivalled UK's largest range that you have become accustomed to, however this now includes a global product range all designed to ensure you select the correct product for your application.

We look forward to working with you.

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For over 130 years, we have fostered strong relationships around the world.

Ingenuity and craft

With ingenuity and craft, we have shaped molten iron into products that serve as the infrastructure of neighbourhoods, villages and cities.

Integrity and heart

With integrity and heart, we have responded to our customers' needs and expectations and built names for ourselves.

Our family heritage and legacy have been the cornerstone of our journey and our inspiration to grow.



Our legacy of continuous improvement, innovation and safety will extend far into the future.

Customer-driven.
Constant innovation.

Personal safety for every EJ employee is imperative. We incorporate safe practices into every process, product and service we provide - from design and manufacture, through distribution and end use.

Our highly trained and experienced in-house product development teams will provide the optimum solutions to solve our customers' challenges. We will continue to explore the use of alternative materials for special application areas.

With the combined strengths of the EJ global network, no other company matches our:

- customer care
- inventory levels
- product range
- certified quality
- technical expertise
- product development
- manufacturing capacity



Shared commitment. Common bond.

We've been on parallel paths: committed to creating the best infrastructure access solutions for our customers and backing them with unparalleled customer care. This commitment is our common bond. It melts distance, cultures and language. It's what strengthens us as a company under our name EJ.

Together, we are the world leader in the design, manufacture and distribution of access covers and gratings for water, sewer, drainage, telecommunications and utility networks.

Global expertise. Local understanding.

As a worldwide company, we excel at serving our customers by leveraging our global and local strengths. To ensure every customer benefits from our global learning, we collaborate across departments. From Design to Manufacture, Research to Customer Care-from North America to France, Australia to UK: we share facts, data and developments across all disciplines.

This expertise includes the intelligence we gain through in-house research, on-road testing, and through participation in Standards committees around the world. Our research and collaboration give us the edge in creating the best infrastructure solutions available: solutions that lead the industry, act as best-in-class benchmarks, and satisfy the most demanding customer expectation.

Our distribution network, manufacturing facilities, and highly developed understanding of local cultures and standards puts us in a perfect place to back our solutions with knowledgeable and responsive customer service. Our modern, regional production capabilities put inventories within quick reach of our customers. The result: Our customers have unrivalled access to innovations, inventories and service in the field.

Our people: Our core strength.

Along with our distributors and agents, we take pride in what we do. We are honest and genuinely committed to creating and maintaining real, long-lasting relationships. We work where you work, we live where you live. We hire the right people, and give them superior knowledge. It is our employees' world class knowledge and expertise that continues to keep us leading in our globally competitive industry.

We are fortunate to have a long history of attracting and retaining outstanding people. Our workforce is diverse, knowledgeable and loyal, and often includes multiple generations from the same family. Our passionate and dedicated teams repeatedly earn recognition for their high degree of professionalism.

We are now a global enterprise that spans 5 continents promoting innovation, quality and a commitment to customer service.



Our EMEA iron foundry is located in Picardie, France. With a 100,000 tonnes capacity, 42 hectares (over 100 acres). We are ISO 9001, ISO 14001, ISO 50001 and OHSAS 18001 certified for: quality, management, environment and health and safety.



Located in Birr, Ireland we have a fabricated steel facility. Management system certification includes ISO 9001, ISO 14001 and OHSAS 18001 for quality, environment, health and safety.



Located in Ardennes, France, we have another fabrication facility containing the most advanced technology in Europe such as plasma cutting & robotic welding, and provides high volume capacity as well as tailor-made solutions to the marketplace. Management system certification includes ISO 9001, ISO 14001, and OHSAS 18001 for quality, environment, health and safety.

Quality, Safety, Management

Quality Assurance

BS EN 1433
Our LIBERTY DRAIN™ products are all certified to EN 1433. EN 1433 is the European standard for all drainage channels for vehicular and pedestrian areas.

EN 1433 is a harmonised standard throughout Europe, therefore to conform to the standard our products are also CE marked for increased performance.

Safety First

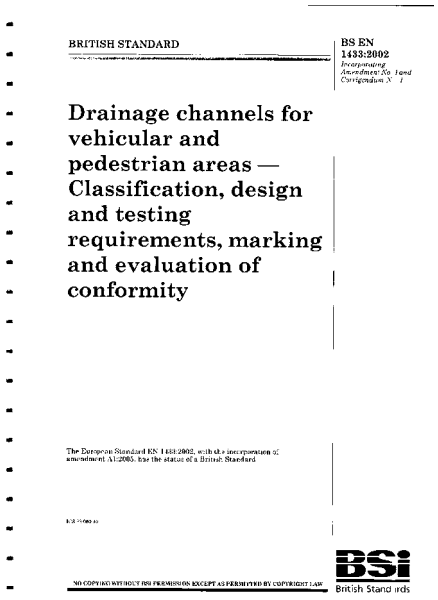
CHAS Health & Safety
We are well aware of our responsibilities and have therefore made industrial safety our top priority. The health & safety of the men and women on our production site is an essential and of paramount importance. It is our responsibility to reduce the risks inherent in our activities to an absolute minimum.

No task is so important that it needs to be performed in an unsafe manner.

Management Efficiency

ISO 9001 standard
We are certified by the British Standards Institute (BSI) to BS EN ISO 9001 which covers all aspects of our business from product design and manufacture through to administration, order processing and stock-holding.
Our quality management system:

- Places the customer at the centre of our thoughts, assuring that their requirements and levels of satisfaction are fully met
- Aims to constantly improve the performance and efficiency of the business
- Is based on the principle of continuous improvement.


BRITISH STANDARD

BS EN 1433:2002

Drainage channels for vehicular and pedestrian areas — Classification, design and testing requirements, marking and evaluation of conformity





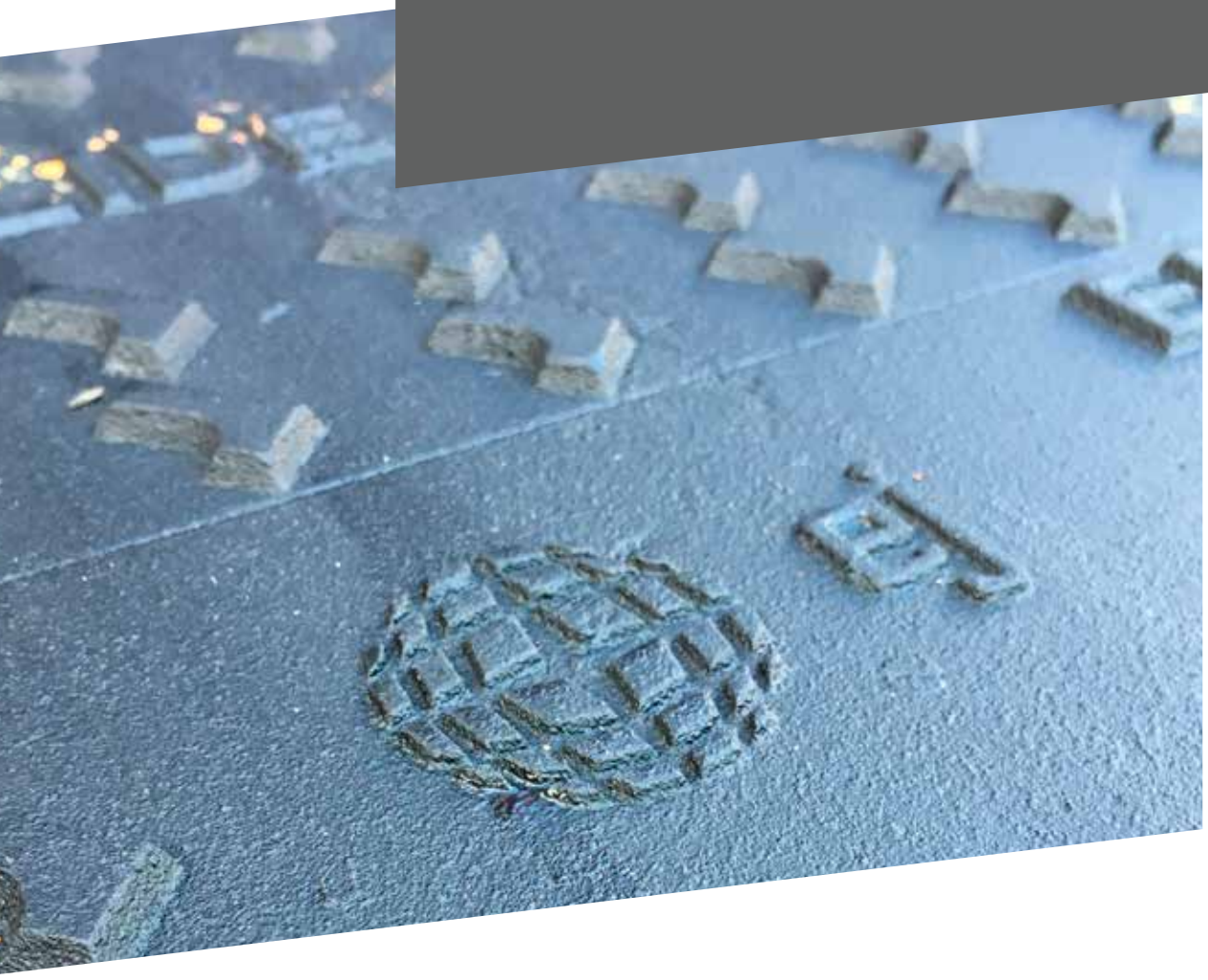


Quality & Experience

Another contributing element to our success is the quality and experience of our employees. Their dedication and hard work symbolises the will of the company to ensure that customers, specifiers and contractors alike are provided the very highest level of service. Our staff have unrivalled product and market knowledge which in many cases has been gained through long term service and previous experience within the industry.



LIBERTY DRAIN™ Introduction



LIBERTY DRAIN™
Introduction

LIBERTY DRAIN™ system provides an economical and effective method for the collection and conveying of surface water. The innovative design and materials utilised enables the installation process to be easier than ever.

Our range includes:

- **Domestic Drainage**
- **C 250 Drainage**
- **D 400 Drainage**
- **F 900 Drainage**

Our range of LIBERTY DRAIN™ systems are available in a variety of depths and widths including:

- **100 mm Wide**
- **150 mm Wide**
- **200 mm Wide**
- **300 mm Wide**

- **50 mm Deep (72 mm Invert Depth)**
- **100 mm Deep (122 mm Invert Depth)**
- **150 mm Deep (172 mm Invert Depth)**
- **200 mm Deep (222 mm Invert Depth)**
- **300 mm Deep (322 mm Invert Depth)**

The LIBERTY DRAIN™ channel system is made up of 2 key components, the channel base and the grate. The channel base is manufactured from thermoplastic polymer Polypropylene (PP). PP is a tough but lightweight material which helps reduce transportation costs/carbon footprint and is 100% recyclable.

Fitted to the channel base is either a galvanised steel or polypropylene (100 mm wide only) edge protection which provides the system with excellent protection against regular vehicle traffic.

The system is secured by way of 8 locking points per metre throughout the range and can be secured further by utilising a series of galvanised steel anchors which offer increased anchorage. The channel is finished with your choice of recyclable ductile iron gratings which are locked in position.



LIBERTY DRAIN™
EN 1433 Loading Classifications

The LIBERTY DRAIN™ system is defined by EN 1433 standards as 'type M', this means that the channels are strengthened by a further support (concrete casting) to sustain the vertical and horizontal loads. LIBERTY DRAIN™ type M channel system is fully certified to BS EN 1433:2002 and can support load class performance up to and including F 900 which is suitable for all wheeled vehicles which includes all road vehicles, forklift trucks & aircraft.

A 15



C 250



D 400

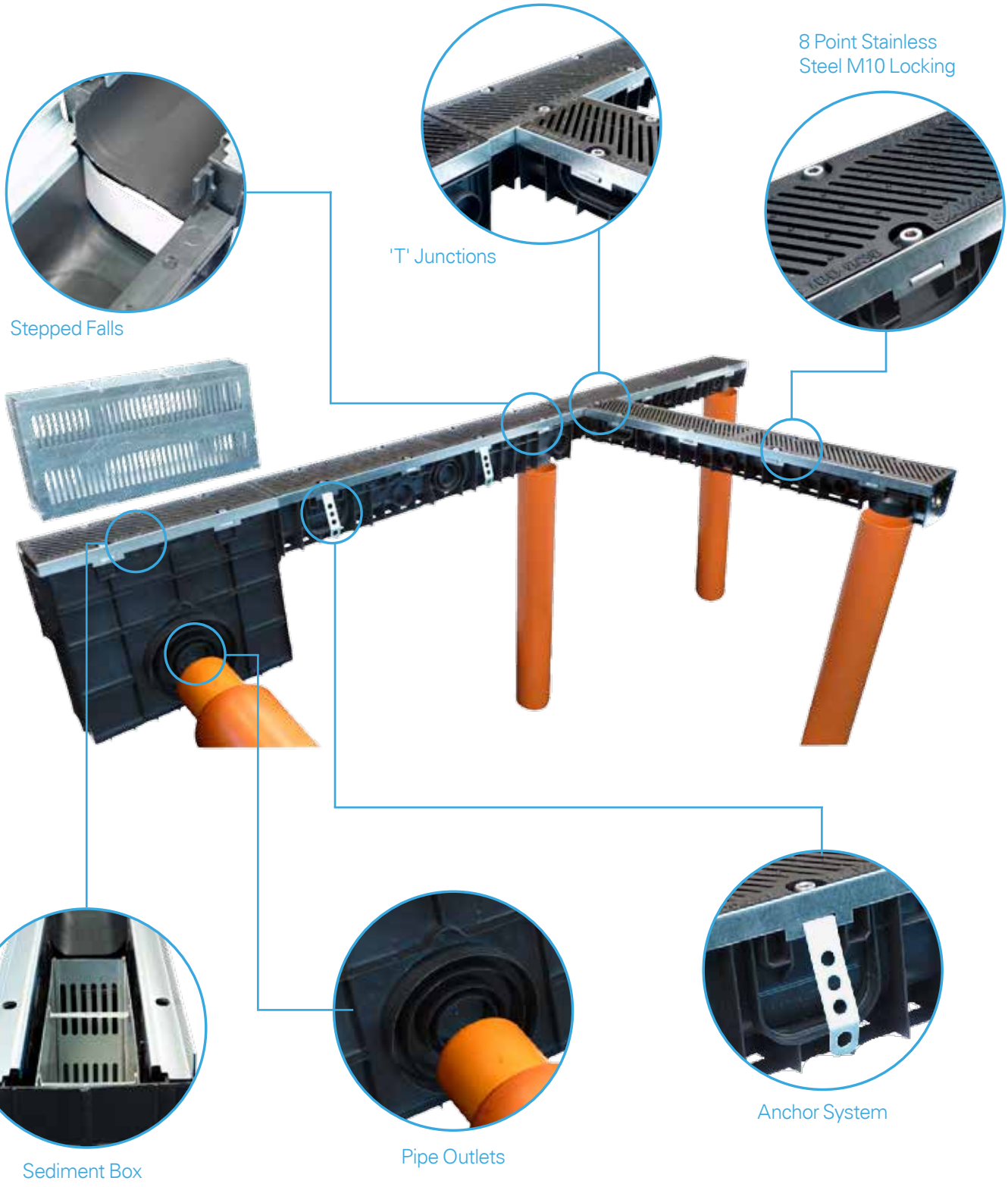


F 900



EN 1433 Class	Area of Installation	BS EN 1433 Test Load
A 15	For use in pedestrian areas in domestic applications.	15 kN
C 250	For areas where slow moving light commercial vehicles have access e.g. pedestrian precincts, cycle ways, private car parks and drives, service stations (cars), parking areas, supermarkets.	250 kN
D 400	For areas where slow moving heavy vehicles have access e.g. pedestrian precincts, cycle ways, car parks, service stations, supermarkets, light industrial units, sport & leisure.	400 kN
F 900	For use in areas where extremely high wheel loads are present e.g. areas with fork-lifts, turning articulated vehicles, airports, ports.	900 kN

LIBERTY DRAIN™
Features



LIBERTY DRAIN™
How to specify

From site survey, drawing take off, hydraulic calculations, installation and maintenance of your product, EJ are committed to working with you offering linear drainage systems that perform the way you expect.

Specifying LIBERTY DRAIN™ is easy:

Code	Loading	Internal Width (mm)		Slot Width (mm)		Channel Base Depth (mm) (Invert Depth)
LD	C 250 - **C**	100	-	6	-	50 (72)
	D 400 - **D**	150		15		100 (122)
	F 900 - **F**	200				150 (172)
		300				200 (222)
						300 (322)

A LIBERTY DRAIN™ channel, D 400 loading with an internal width of 100 mm, slot width of 6 mm, and internal depth of 150 mm would provide the following code: **LDD100-6-150**

The above information serves as a guide only and some options are only available on certain width/loadings. Our experienced technical team are available for site visits and to make recommendations on choosing the correct solution.

LIBERTY DRAIN™
Project Examples

Project	Product Supplied
Healeys Cider Farm, Newquay	LDF200-15-200
Matalan, Worksop	LDC100-6-100
Teddington Sports Centre, Richmond upon Thames	LDC100-6-100
Corporation Street, Swindon	LDD200-6-100
Premier Inn, Portsmouth	LDD200-6-100
Middlesborough Bus Station	LDD200-6-100
Starbucks, Gordano M5 Services	LD100-6-100
Yew Tree Garden Centre, Newbury	LDD150-6-100
Nacton Fire Station, Ipswich	LDF150-15-150
St Peters School, Portishead	LDC100-6-100



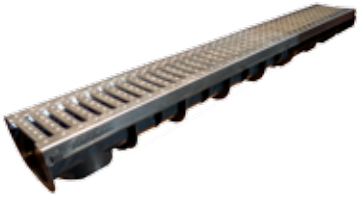
LIBERTY DRAIN™ Domestic Drainage



LIB PLAS & LIB GALV
Domestic Drainage



LIB PLAS



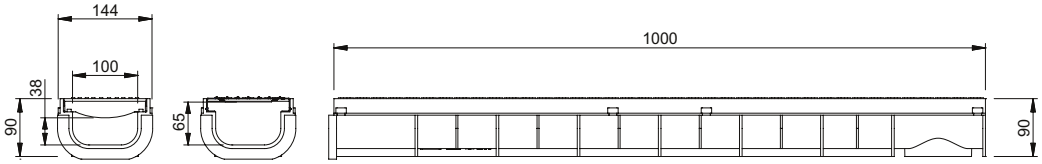
LIB GALV

Features:

- Manufactured to BS EN 1433 class A 15
- Easy fit channel interlocking system
- Snap-lock boltless grating system
- Unobstructed channel cross section for easy cleaning
- Durable & long lasting
- Eco friendly - 100% recyclable
- LIB PLAS - Diagonal safe slot Polypropylene grating
- LIB GALV - Straight slot galvanised steel grating

Standard Sizes

Code	Internal Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Description	Waterway (cm^2 per grate)	Weight (kg)
LIB PLAS	100	65	144	90	1000 mm c/w Polypropylene Grate	299	1.75
LIB GALV	100	65	144	90	1000 mm c/w Galvanised Steel Grate	283	1.75



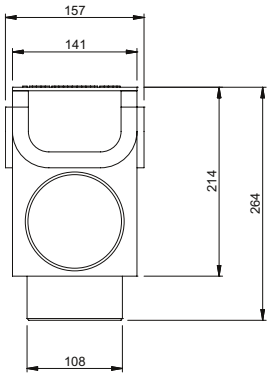
ACCESSORIES
Domestic Drainage



LIB-SUMP



PLAS-END



LIB-SUMP/CORNER Unit

- 5 No 110 mm diameter outlet connection points
- 4 way universal channel connection points
- Sump unit complete with removable galvanised sediment bucket
- Attractive diagonal safe-slot grating
- Easy fit channel interlocking system
- Optional security points for site locking
- Durable and long lasting
- Eco Friendly - 100% recyclable

Standard Sizes

Code	O/all Width (mm)	O/all Depth (mm)	Description	Waterway (cm^2 per grate)	Weight (kg)
LIB CORNER	157	264	C/w 135 x 135 mm Polyprop Grate	37	1
LIB SUMP	157	264	C/w 135 x 135 mm Polyprop Grate inc Sediment Basket	37	2.5
PLAS END	138	70	Polypropylene End Cap	-	0.1

LIB1
Domestic Drainage



LIB1



LIB3

Features:

- Manufactured to BS EN 1433 class A 15
- Snap-lock boltless grating system
- Unobstructed channel cross section for easy cleaning
- Durable & long lasting
- Eco friendly - 100% recyclable
- Galvanised steel grating
- Polymer concrete channel base

Standard Sizes

Code	Internal Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Description	Weight (kg)
LIB1	100	60	120	78	1000 mm c/w Galvanised Steel Grate	7.1
LIB3	-	-	120	288	500 mm Sump c/w Galvanised Steel Grate & Sediment bucket	13.3
LIB4	-	-	120	78	End cap	0.06

LIBERTY DRAIN™ Industrial Drainage

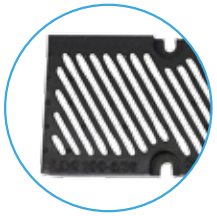


LIBERTY DRAIN™ 100

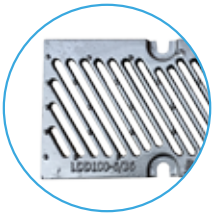
100 mm Wide
Innovative Channel Drainage



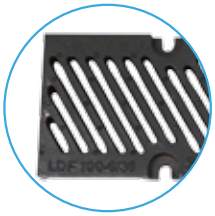
LIBERTY DRAIN™ 100



C 250 Grating



D 400 Grating



F 900 Grating

Features:

- Manufactured to BS EN 1433 class C 250, D 400, F 900 as specified
- High quality polypropylene channel base
- Interlocking channel tongue & groove joints
- Smooth internal face for rapid flow rates
- Ductile Iron gratings
- 6 mm Safe-slot gratings
- 8 point locking per metre
- Galvanised Steel edge rail

Options:

- Stepped Falls
- Integrated 90° turns
- Integrated 'T' junctions

Standard Sizes

Code	Int Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Loading	Waterway (cm^2 per grate)	Weight (kg)
LDC100-6-50	100	72	157	105	C 250	282	12
LDC100-6-100	100	122	157	155	C 250	282	12
LDC100-6-150	100	172	157	205	C 250	282	13
LDD100-6-50	100	72	159	106	D 400	235	14
LDD100-6-100	100	122	159	156	D 400	235	15
LDD100-6-150	100	172	159	206	D 400	235	16
LDF100-6-50	100	72	159	106	F 900	217	18
LDF100-6-100	100	122	159	156	F 900	217	19
LDF100-6-150	100	172	159	206	F 900	217	20

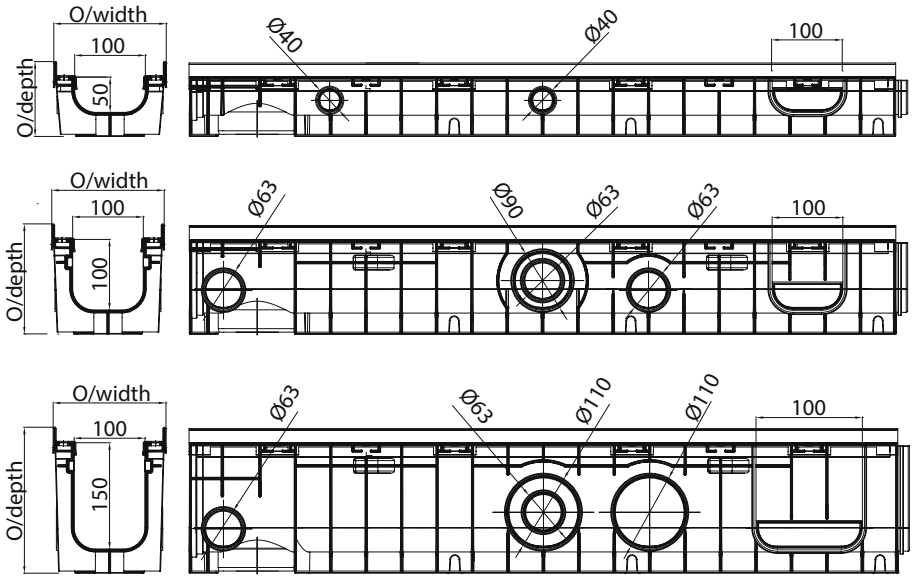
Sump Unit

Standard Sizes

LDC100-6-400	100	422	159	442	C 250	282	16
LDD100-6-400	100	422	159	442	D 400	235	17
LDF100-6-400	100	422	159	442	F 900	217	19

LIBERTY DRAIN™ 100

100 mm Wide
Innovative Channel Drainage



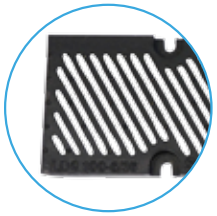


LIBERTY DRAIN™ 100P

100 mm Wide
Innovative Channel Drainage



LIBERTY DRAIN™ 100P



C 250 Grating



Liberty Slot

Features:

- Manufactured to BS EN 1433 class C 250
- High quality polypropylene channel base
- Interlocking channel tongue & groove joints
- Smooth internal face for rapid flow rates
- Ductile Iron gratings
- 6 mm Safe-slot gratings
- 8 point locking per metre
- Polypropylene edge rail

Options:

- Stepped Falls
- Integrated 90° turns
- Integrated 'T' junctions

Liberty Slot Features:

- Galvanised Steel
- 15 mm Slot Width
- 100 mm Internal Depth
- Suits upto 80 mm deep block paving

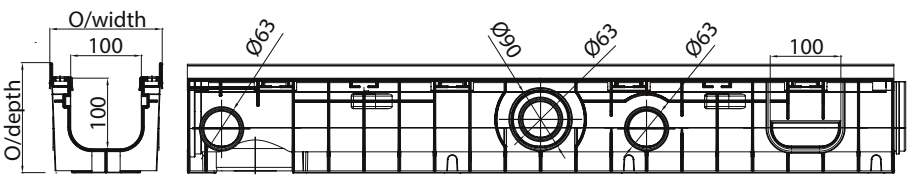
Standard Sizes

Code	Int Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Loading	Waterway (cm² per grate)	Weight (kg)
LDCP100-6-50	100	71	157	105	C 250	282	12
LDCP100-6-100	100	121	157	155	C 250	282	12
LDCP100-6-150	100	171	157	205	C 250	282	13
LDLS100-15-100	100	121	157	255	C 250	-	11

Sump Unit

Standard Sizes

LDCP100-6-400	100	421	157	441	C 250	282	16
LDLS100-15-500	100	421	157	541	C 250	-	15



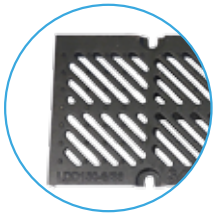


LIBERTY DRAIN™ 150

150 mm Wide
Innovative Channel Drainage



LIBERTY DRAIN™ 150



D 400 Grating



F 900 Grating

Features:

- Manufactured to BS EN 1433 class D 400, F 900 as specified
- High quality polypropylene channel base
- Interlocking channel tongue & groove joints
- Smooth internal face for rapid flow rates
- Ductile Iron gratings
- 6 mm Safe-slot gratings (D 400)
- 15 mm Hydro-slot for maximum capacity drainage (F 900)
- 8 point locking per metre
- Galvanised Steel edge rail

Options:

- Stepped Falls
- Integrated 90° turns
- Integrated 'T' junctions

Standard Sizes

Code	Int Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Loading	Waterway (cm^2 per grate)	Weight (kg)
LDD150-6-100	150	122	209	156	D 400	231	21
LDD150-6-150	150	172	209	206	D 400	231	22
LDF150-15-100	150	122	209	156	F 900	383	24
LDF150-15-150	150	172	209	206	F 900	383	24

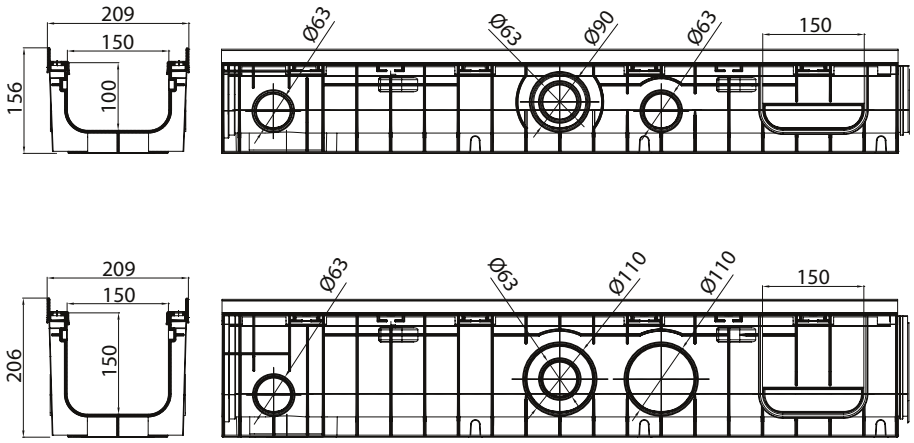
Sump Unit

Standard Sizes

LDD150-6-400	150	422	209	442	D 400	231	23
LDF150-15-400	150	422	209	442	F 900	383	22

LIBERTY DRAIN™ 150

150 mm Wide
Innovative Channel Drainage



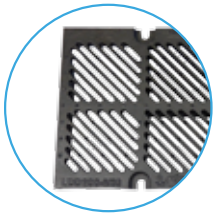


LIBERTY DRAIN™ 200

200 mm Wide
Innovative Channel Drainage



LIBERTY DRAIN™ 200



D 400 Grating



F 900 Grating

Features:

- Manufactured to BS EN 1433 class D 400, F 900 as specified
- High quality polypropylene channel base
- Interlocking channel tongue & groove joints
- Smooth internal face for rapid flow rates
- Ductile Iron gratings
- 6 mm Safe-slot gratings (D 400)
- 15 mm Hydro-slot for maximum capacity drainage (F 900)
- 8 point locking per metre
- Galvanised Steel edge rail

Options:

- Stepped Falls
- Integrated 90° turns
- Integrated 'T' junctions

Standard Sizes

Code	Int Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Loading	Waterway (cm^2 per grate)	Weight (kg)
LDD200-6-100	200	122	259	156	D 400	412	30
LDD200-6-150	200	172	259	206	D 400	412	30
LDD200-6-200	200	222	259	256	D 400	412	31
LDD200-6-300	200	322	259	356	D 400	412	32
LDF200-15-100	200	122	259	156	F 900	505	27
LDF200-15-150	200	172	259	206	F 900	505	28
LDF200-15-200	200	222	259	256	F 900	505	28
LDF200-15-300	200	322	259	306	F 900	505	29

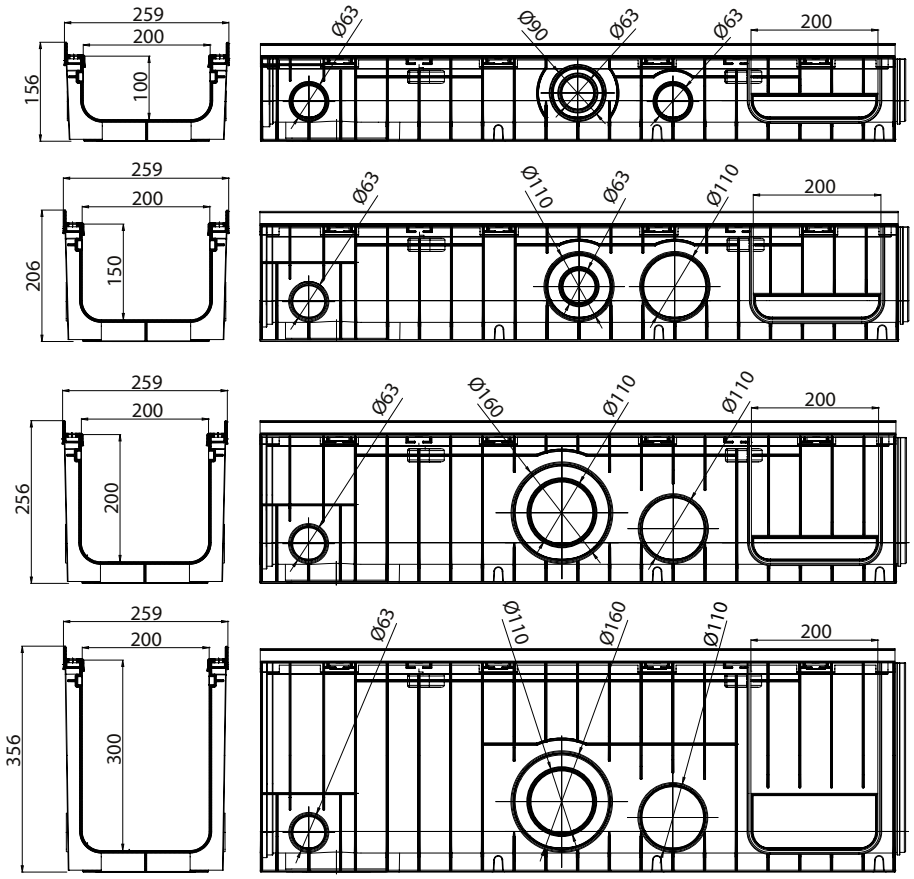
Sump Unit

Standard Sizes

LDD200-6-400	200	422	259	442	D 400	412	28
LDF200-15-400	200	422	259	442	F 900	505	27

LIBERTY DRAIN™ 200

200 mm Wide
Innovative Channel Drainage





LIBERTY DRAIN™ 300

300 mm Wide
Innovative Channel Drainage



LIBERTY DRAIN™ 300



F 900 Grating

Features:

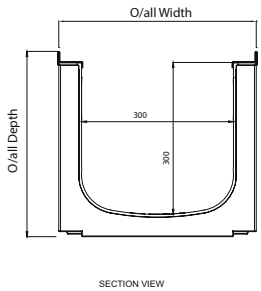
- Manufactured to BS EN 1433 class D 400, F 900 as specified
- High quality polypropylene channel base
- Interlocking channel tongue & groove joints
- Smooth internal face for rapid flow rates
- Ductile Iron gratings
- 15 mm Hydro-slot for maximum capacity drainage
- 8 point locking per metre
- Galvanised Steel edge rail

Options:

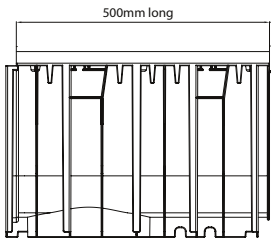
- Stepped Falls
- Integrated 90° turns
- Integrated 'T' junctions

Standard Sizes

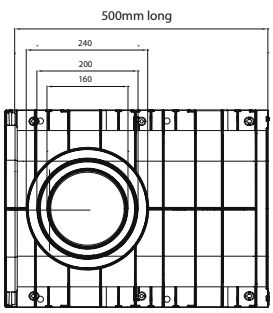
Code	Int Width (mm)	Invert Depth (mm)	O/all Width (mm)	O/all Depth (mm)	Loading	Waterway (cm^2 per grate)	Weight (kg)
LDF300-15-200	300	222	390	260	F 900	759	33
LDF300-15-300	300	322	390	360	F 900	759	34



SECTION VIEW



SIDE VIEW



BOTTOM VIEW

LIBERTY DRAIN™ Accessories & Installation



Accessories
Sump Units



Sump units are supplied complete with:

- 1 x Galvanised Steel Sediment Bucket
- 1 x 500 mm Grate C 250, D 400 or F 900
- 2 x 500 mm Edge rail
- 4 x M10 Stainless Steel bolts
- 4 x Steel Anchors or Short Anchors (C 250)

Sump outlet sizes:

- Ø200 mm
- Ø160 mm
- Ø110 mm
- Ø80 mm

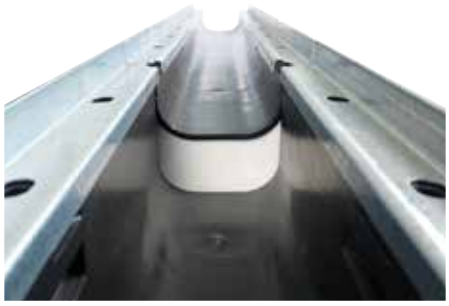
For sizes and more information refer back to each individual product page.

Accessories
Stepped Cap

Stepped caps are used to fill the void underneath the channel when you are looking to add a step in the LIBERTY DRAIN™ system.

Standard Sizes

Code	Width (mm)	Depth (mm)
LDSC100-50	100	50
LDSC150-50	150	50
LDSC200-50	150	50
LDSC200-100	200	100





Accessories
End Caps

End caps can be supplied with self tapping screws. A sealant is recommended for increased watertight installations.

Standard Sizes

Code	Int Width (mm)	Int Depth (mm)
LDEC-MULTI-100*	100	150
LDEC-MULTI-150**	150	150
LDEC200-100	200	100
LDEC200-150	200	150
LDEC200-200	200	200
LDEC200-300	200	300

*Designed to suit all 100 mm wide channels.
**Designed to suit all 150 mm wide channels.



Accessories
Spigot Outlets

Spigot outlets for pipe connections can be supplied complete with self tapping screws, pipe outlets are available in various sizes to suit. A sealant is recommended for increased watertight installations.

Standard Sizes

Code	Size
LDSO40	Ø40 mm
LDSO110	Ø110 mm
LDSO160	Ø160 mm



Accessories
Steel Anchor

Steel anchors are used to help bedding the channel into the concrete. Longer anchors are generally used for D 400 & F 900 applications, with the shorter anchors used for C 250 applications.

Standard Sizes

Code	Size (mm)
LDSA	28 x 26
LDLA	28 x 115





Extras
Installation Instructions

These installation instructions are intended to assist the work of the company responsible for an installation. They are applicable for the installation of LIBERTY DRAIN™ within this brochure.

1. Digging the Trench

Excavate the trench around a centre line. Ensure that the trench is of sufficient dimensions to accommodate:

1. Channel/Sump width and depth
2. Appropriate concrete surround dimensions for loading and installation type
3. The fall of the drain run in the case of stepped systems

Ensure that all loose material is removed from the trench and the base is well compacted - particularly if the ground is soft. Run a string guide or laser level along the full length of the trench at surface level to ensure installation at correct gradient.

2. Concrete Laying

Lay a bed of concrete to the recommended thickness. For higher load classes (D 400, F 900) we suggest reinforcing the concrete with steel rods for better load distribution.

3. Lay the Channel

All installations should commence from the outlet point and work away from the outlet. Lay the assembled channels on the ground, all screws should be tightened to prevent channels from distorting due to concrete pressure. Gratings and screws should be suitably protected from concrete fouling.

4. Lateral Support in Concrete

Concrete should have a minimum compressive strength and be of a type suitable for exterior use. Apply a lateral backfill onto the channel with suitable concrete and thickness as recommended.

Always pour concrete evenly on both sides of the channel to avoid dislodging. A wand-type vibrator should be used to ensure even distribution of concrete around and underneath the channels and it should fill in all interstices, in particular behind the support edgings of the grids. Concrete should be finished to a slight slope down to the channel.

Channel upper edges should sit 3 mm lower than the surrounding finished concrete surface and the joint between concrete and channel edge should be finished to 45 degrees, this is essential to protect the trench edge under trafficking. Installations into concrete areas should include expansion joints between trench infill and adjoining pavement to engineer's specifications.

5. The Finishing

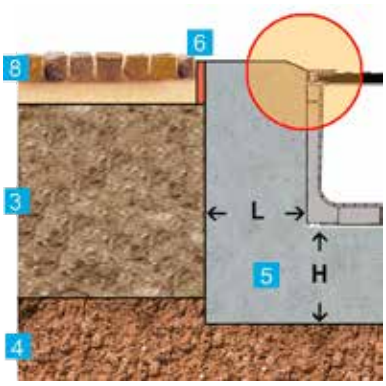
When the concrete has set, it is possible to proceed with the flooring of asphalt, tiles, paving etc. Particular care should be taken if using an asphalt rolling machine to avoid damage to the edge of the system. If the gratings have not already been covered it is recommended that they are covered with a plastic film in order to protect them.

When the surrounding surface has set, remove gratings, remove debris from drain system and ensure all other outlets are clear. Install debris buckets into sumps/silt boxes if required and flush the system to check for blockages. Empty debris buckets and clear outlets, refit debris buckets. Refit gratings ensuring they are correctly located and secured into position.

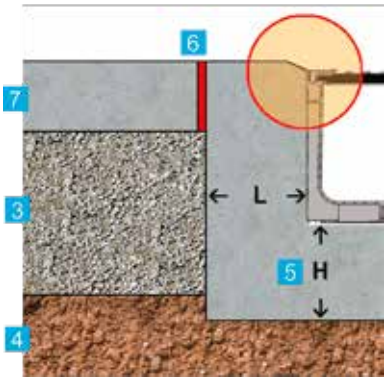
Extras
Installation Instructions

Installation details for various application types.

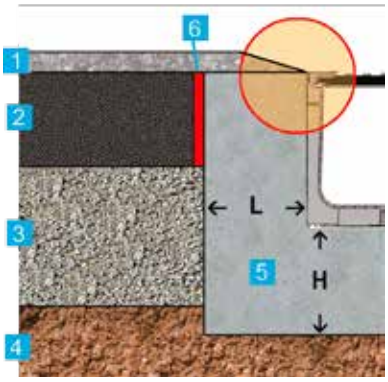
Block Paving



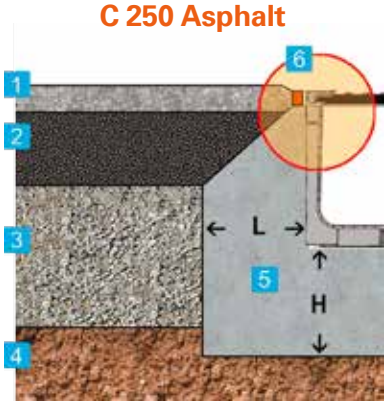
Concrete Slab



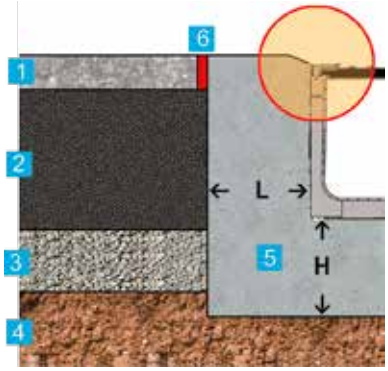
Draining Asphalt



C 250 Asphalt



D 400/F 900 Asphalt



1. Wearing asphalt layer
2. Lower layer
3. Bearing Layer
4. Under backfill
5. Concrete backfill
6. Bitumen joint
7. Concrete Slab
8. Self blocking paving

Installation Data			**Min Concrete Compressive Strength**
A 15	L = 50 mm	H = 50 mm	25N/mm²
C 250	L = 120 mm	H = 120 mm	25N/mm²
D 400	L = 150 mm	H= 150 mm	30N/mm²
F 900	L = 200 mm	H = 200 mm	35N/mm²

Concrete Requirements

The quality of the concrete used for the bed and backfill is essential for the life span of the channel and for its resistance to loads. The following features are essential requirements: Compressive strength class Rck (EN 206-1) is recommended. Gravel aggregates with a maximum diameter 8 mm, non reactive to alkali and must be frost resistant cement. We recommend that you vibrate the concrete appropriately so as to avoid air bubbles and to be sure of the perfect adherence of the concrete to the channel.

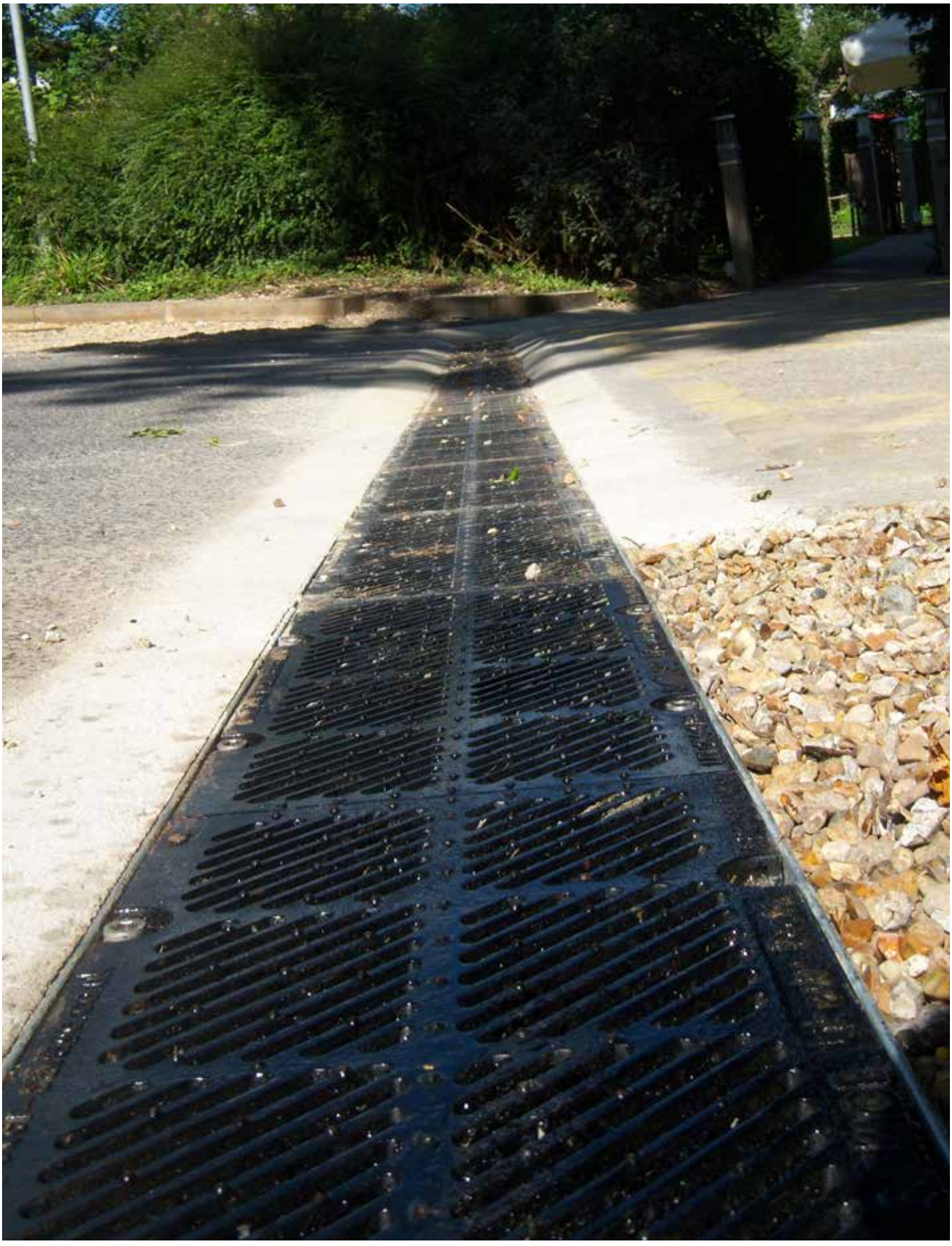
Channel Outlets

The LIBERTY DRAIN™ channel system features a number of preset side and bottom channel connection points. To create the apertures on these connection points, make initial drill holes within the partial wall pre-cut areas and then neatly cut out the full assigned aperture using a saw or other suitable cutting apparatus.

Maintenance

Regular inspections are recommended to ensure continuous performance of the LIBERTY DRAIN™ channel system. Frequency should be determined as applicable to local operating conditions but should be annually as a minimum. Regular cleaning of the channel system is also recommended to remove all silt and any debris within the system.

Notes





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