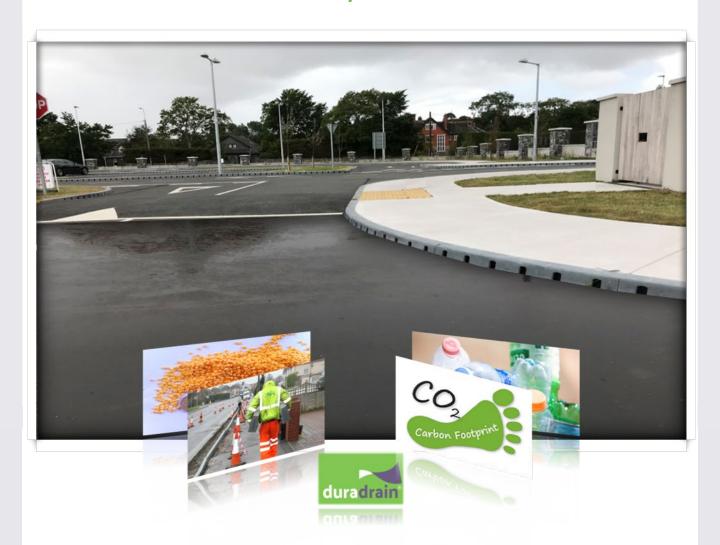




Recycled & Recyclable Heavy Duty Combined Kerb & Drainage System









### Heavy Duty Recycled & Recyclable Combined Kerb & Drainage System

#### **Greener – Safer – Simpler**

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#### The safer and sustainable choice for combined kerb drainage

Durakerb are part of the Econpro Group. Econpro are a specialist group of companies that transform waste and by-product into sustainable products and solutions.

Durakerb manufacture lightweight and recycled products and systems that provide for a safer, greener, faster and easier solution to kerbing and kerb-side drainage. They provide you with the opportunity to design and construct with responsibility.

- 1 Responsibility to the environment
- 2 Responsibility to your workforce

Waste plastic doesn't have to be a problem if we recycle and re-use responsibly. There are 182 bottles caps and closures in an average Durakerb standard unit and over 400,000 units sold to date. That is over 72 million fixed within kerb-lines across the UK.

In choosing Dura products for your project, you will be improving the environment by providing a safe and useful destination for waste plastic.

Our three ranges, although unique in some respects, are specifically designed to comply with regular industry and/or harmonised standards so can be specified "or similar" so the tender and award process is free to all products and manufacturers for comparison without exclusion. For any OJEC project and for any harmonised standard, the CE mark is the primary mark for compliance.

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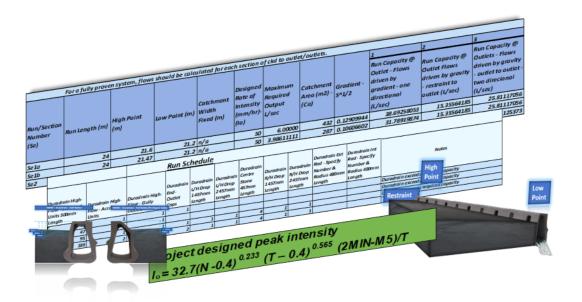




#### The safer and sustainable choice for combined kerb drainage

Econpro offer a free design advice service for Surface Drainage and Kerb Edge Solutions. Ref - MCHW Series 500-EN1433 – Ref - MCHW Series 1100-EN1340.

We can supply simple take-offs with itemized schedules for tender purposes. Advice on the optimum position and method of collection for surface drainage, hydraulic proofs with individual run schedules right through to full project layouts with all necessary supporting technical, compliance and installation data necessary for approval purposes.



Please see our website for more information.

#### www.durakerb.co.uk

Econpro WDS Limited, Unit 13a, Deeside Industrial Estate (Zone 1 Central), Drome Road, Deeside CH5 2LR

Tel: 01244 289003 e: info@econpro.co.uk www.econpro.co.uk







#### **Increased Productivity**



**High Recycled Content** 



Automated & Precision Manufacture



Lighter - Safer & Sustainable



Please see our website for more information

www.durakerb.co.uk







All exposed impermeable surfaces and structures require efficient drainage to prevent flooding or settlement and to protect surfaces. Duradrain is a heavy duty combined kerb and drainage system (CKD) that provides an efficient and safe method of draining highways, car parks and potentially any surface or structure with a kerb edge.

Combined kerb and drainage systems collect run-off continually and quickly which helps extend the life of a project and improve the conditions for users and their safety, particularly in Highways. Unlike the traditional kerb and gully method where flows compound on the surface, the collected run-off is contained and driven to outlet hidden within the channel body. As the kerb-lines are traditionally set at a low point, the levels on site can be simplified using one-directional cross-fall/camber to deliver surface water to the kerb-side.





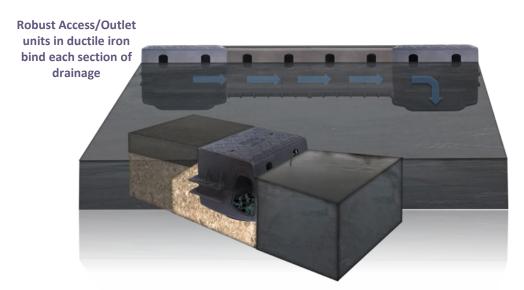




A successful system will quickly collect and dispose of run-off from and within the structure/landscape. Duradrain provides a seamless integration for the most toughest of applications.

The rear retention element provides total integration with the rear bracing, from access to outlet.

### Duradrain gives you all-round cover



The balance of recycled polymer and filler provide a high compressive strength (HD-D400) and a high flexural strength to withstand both load and impact.







70000 - Duradrain - Half Batter

60000 - Duradrain - Full Batter/45 Degree Splay



### **Duradrain delivers hydraulically**

The combination of a large usable volume and hydraulically efficient material means Duradrain creates fast flows and good silt transit. This aids longevity of structure, system and product, reducing the frequency of future maintenance.



Duradrain 70000 Combined Kerb & Drainage HB Profile Standard Unit

Length = 500mm Width = 215mm Depth = 305mm Profile = Half Batter

Designed Weir Height/Kerb-Show = 75-125mm

Usable Flow Area = 21,197mm<sup>2</sup> Roughness Value = 0.009







The Duradrain range is produced to match Durakerb and most traditional standard kerbs used extensively across the UK. The range is similar to traditional kerb and combined kerb and drainage systems in terms of function, compliance, dimension, profile and transition.



**Greener – Simpler – Safer - Better** 

Duradrain standard units are made from the same material as Durakerb therefore for every unit installed you will be effectively finding a safe and controlled destination for waste plastic that is fixed, ready for future reclaim and re-use.

The lightweight standard units mean a simple, quicker and easier method of installation reducing your impact on the environment and your workforce.









#### **Compliance**

#### **Quality - Compliance - Performance - Assured**

For Combined kerb & drainage systems the Harmonised Standard verifies compliance and defines the requirements and demands for a product. The requirements for compliance have been developed and set by CEN/CENILEC within EU Legislation. They are designed to remove barriers to trade, promote entreprenuership and improve access to markets.

Duradrain complies fully with the harmonised standard (EN1433 - Heavy Duty Load Category – D400) and carries the CE mark. Duradrain also meets the requirements of the interim advice note IAN117/08 Rev 2 and can be approved, used and adopted within highways across the UK, Ireland & Mainland Europe.



Please note – Harmonised Standards verify compliance and define the requirements for a product based on the intended function. The requirements for compliance have been developed and set by CEN/CENILEC within EU Legislation. They are designed to remove barriers to trade, promote entreprenuership and improve access to markets.









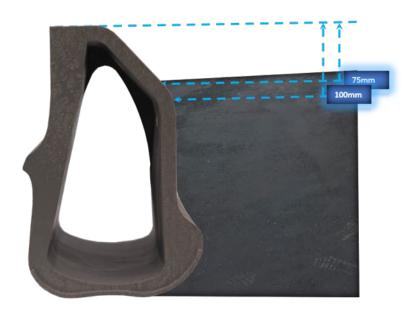








60000 - Duradrain - Full Batter/45 Degree Splay



Inlet windows are set to the following range of kerb/weir heights.

Full Batter/Splay - 75-100mm

Where there are changes in function affecting kerb-heights, transitions should be gradual and the invert depth within the channel body maintained. The choice of profile and kerb-show are generally consistent with standard BS-EN1340 kerbs (1100) series, see DMRB - HA83/99









The recycled & recyclable lightweight standard units are manufactured from a hydraulically efficient material and have a large useable volume. This means large areas can be drained quickly and safely, protecting surfaces by taking run-off at multiple points across the whole length of the kerb-line.

Ιt	em Code	Description	Weight	Depth	Length	Width	<b>Usable Flow</b>	Kerb-Show	Certification	Load Category
6	0000	Duradrain 305 Full Battered/Splay Standard Unit	7kg	305mm	500mm	220mm	22,182mm2	100/75mm	EN1433:2002	HD - Group 4 - D400



The Duradrain full batter ductile iron top and base units are a high quality and heavy duty access/outlet.

For busy highway routes they are an ideal bind for combined kerb and drainage units as the extents of a drainage run can often be the most exposed.

Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Certification	Load Category
60050	Duradrain 305 Full Battered/Splay Gully Outfall	78	305mm	500mm	440mm	100/75mm	EN1433:2002	HD-Group 4 - D400

Gully Outfalls are designed to sit over standard 450mm diameter road gullies or we can supply with a base plate for access only. They allow flows to drops out free and provide a large and robust opening for access and future maintenance.











Duradrain Universal end caps can be fitted to access/outlets and standard units. Simply apply sealant up the window/entry height and fix. Caps can be cut to allow for below ground pipe connections.

Item Code	Desciption	Weight	Depth	Width
60090	Duradrain 305 SP End Cap/Outlet	0.2kg	305mm	220mm





Duradrain solid ductile iron access points can be installed at the head of each run and at regular intervals subject to site conditions.

Units can also be used as a shallow or intermediate outlet point
(EN1401 – 162mm Diameter Rear Pipe Outlet)











Standard units can be supplied facetted to suit both external and internal radii.

Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Radius/m	Certification	Load Category
60100	Duradrain SP External Radius Unit 6/5	7kg	305mm	480mm	220mm	100/75mm	6/5mtr radius	EN1433:2002	HD-Group 4 - D400
60104	Duradrain SP External Radius Unit 10/7	7kg	305mm	480mm	220mm	100/75mm	10/7mtr radius	EN1433:2002	HD-Group 4 - D400
60110	Duradrain SP External Radius Unit 16/11	7kg	305mm	480mm	220mm	100/75mm	16/11mtr radius	EN1433:2002	HD-Group 4 - D400
Item Code	Desciption	Weight	Depth	Length	Width	Kerb-Show	Radius/m	Certification	Load Category
60200	Duradrain SP Internal Radius Unit 6/5	7kg	305mm	480mm	220mm	100/75mm	6/5mtr radius	EN1433:2002	HD-Group 4 - D400
60204	Duradrain SP Internal Radius Unit 10/7	7kg	305mm	480mm	220mm	100/75mm	10/7mtr radius	EN1433:2002	HD-Group 4 - D400
60210	Duradrain SP Internal Radius Unit 16/11	7kg	305mm	480mm	220mm	100/75mm	16/11mtr radius	EN1433:2002	HD-Group 4 - D400

Standard units can be supplied cut and fixed to provide precise external or internal angles.



Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Certification	Load Category
60005	Duradrain External SP-90 Degree Corner	7kg	305mm	300x300mm	220mm	100/75mm	EN1433:2002	HD-Group 4 - D400
60006	Duradrain Internal SP-90 Degree Corner	7ka	305mm	300x300mm	220mm	100/75mm	EN1433:2002	HD-Group 4 - D400









For highway adoption all joints must be sealed. (EN1433-HA-Doc-IAN117/08 Rev 2).

Duradrain sealant should be applied around the channel body up to the road-surface/inlet level. All units have a flush face to face contact so an effective watertight seal can be achieved for every joint. For more information, please our Design & Installation Guide.



Item Cod	de Description	Weight	Volume	Coverage	Colour	COSHH Data
80000	One Part Low Modulus Polyurethane Sealant	2kg	600ml	10 Joints/Tube	Grey	See Downloads
80010	Sealant Applicator	4ka	N/A	N/A	N/A	N/A







The Duradrain half batter combined kerb and drainage system is ideal for draining carriageways, car parks, schools, retail/industrial developments and any structure with a kerb-edge design.









70000 - Duradrain - Half Batter



Inlet windows are set to the following range of kerb/weir heights.

Half Batter - 75-125mm

Where there are changes in function affecting kerb-heights, transitions should be gradual and the invert depth within the channel body maintained. The choice of profile and kerb-show are generally consistent with standard BS-EN1340 kerbs (1100) series, see DMRB - HA83/99









The recycled & recyclable lightweight standard units are manufactured from a hydraulically efficient material and have a large useable volume. This means large areas can be drained quickly and safely, protecting surfaces by taking run-off at multiple points across the whole length of the kerb-line.

Item Code	Description	Weight	Depth	Length	Width	<b>Usable Flow</b>	Kerb-Show	Certification	Load Category
70000	Duradrain 305 Half Rattered Standard Unit	7ka	305mm	500mm	215mm	21 197mm2	125/75mm	FN1433-2002	HD - Group 4 - D400



The Duradrain half batter ductile iron top and base units are a high quality and heavy duty access/outlet.

For busy highway routes they are an ideal bind for combined kerb and drainage units as the extents of a drainage run can often be the most exposed.

Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Certification	Load Category
70050	Duradrain 305 Half Battered Gully Outfall	78	305mm	500mm	440mm	125/75mm	EN1433:2002	HD-Group 4 - D400

Gully Outfalls are designed to sit over standard 450mm diameter road gullies or we can supply with a base plate for access only. They allow flows to drops out free and provide a large and robust opening for access and future maintenance.











Duradrain Universal end caps can be fitted to access/outlets and standard units. Simply apply sealant up the window/entry height and fix. Caps can be cut to allow for below ground pipe connections.

Item Code	Desciption	Weight	Depth	Width
70090	Duradrain 305 End Cap/Outlet	0.2kg	305mm	215mm





Duradrain solid ductile iron access points can be installed at the head of each run and at regular intervals subject to site conditions.

Units can also be used as a shallow or intermediate outlet point (EN1401 – 162mm Diameter Rear Pipe Outlet)











Drop kerbs and centre stones will allow flows to travel through both vehicle and pedestrian crossings and through varied highway features. Standard units are designed to drop from 125/100mm full HB weir height/kerb show. The road surface can be laid-up or down across the drop to achieve 0/6/25mm upstand.









Item Code	Description	Weight	Depth	Length	Width	Certification	Load Category
70010	Duradrain Left Hand Drop Kerb L305	7kg	305mm/255mm	500mm	215mm	EN1433:2002	HD-Group 4 - D400
70015	Duradrain Left Hand Drop Kerb L255	5kg	255mm/205mm	500mm	215mm	EN1433:2002	HD-Group 4 - D400
70020	Duradrain Right Hand Drop Kerb R305	7kg	305mm/255mm	500mm	215mm	EN1433:2002	HD-Group 4 - D400
70025	Duradrain Right Hand Drop Kerb R255	5kg	255mm/205mm	500mm	215mm	EN1433:2002	HD-Group 4 - D400

Duradrain centre stones can be supplied plain or with vertical 8mm pedestrian friendly inlets to maintain drainage intake through the drop.



Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Certification	Load Category
70030	Duradrain Plain Solid Centre Stone	4.8kg	205mm	500mm	215mm	0-25mm	EN1433:2002	HD-Group 4 - D400
70035	Duradrain Drainable Centre Stone	4.8kg	205mm	500mm	215mm	0-25mm	EN1433:2002	HD-Group 4 - D400









Standard units can be supplied facetted to suit both external and internal radii.

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Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Radius/m	Certification	Load Category
70100	Duradrain HB External Radius Unit 6/5	7kg	305mm	480mm	215mm	125/75mm	6/5mtr radius	EN1433:2002	HD-Group 4 - D400
70104	Duradrain HB External Radius Unit 10/7	7kg	305mm	480mm	215mm	125/75mm	10/7mtr radius	EN1433:2002	HD-Group 4 - D400
70110	Duradrain HB External Radius Unit 16/11	7kg	305mm	480mm	215mm	125/75mm	16/11mtr radius	EN1433:2002	HD-Group 4 - D400
Item Code	Desciption	Weight	Depth	Length	Width	Kerb-Show	Radius/m	Certification	Load Category
70200	Duradrain HB Internal Radius Unit 6/5	7kg	305mm	480mm	215mm	125/75mm	6/5mtr radius	EN1433:2002	HD-Group 4 - D400
70201	Duradrain HB Internal Radius Unit 10/7	7kg	305mm	480mm	215mm	125/75mm	10/7mtr radius	EN1433:2002	HD-Group 4 - D400
70210	Duradrain HB Internal Radius Unit 16/11	7kg	305mm	480mm	215mm	125/75mm	16/11mtr radius	EN1433:2002	HD-Group 4 - D400

Standard full-height and dropped units can be supplied cut and fixed to provide precise external or internal angles.



Item Code	Description	Weight	Depth	Length	Width	Kerb-Show	Certification	Load Category
70005	Duradrain External HB-90 Degree Corner	7kg	305mm	300x300mm	215mm	125/75mm	EN1433:2002	HD-Group 4 - D400
70006	Duradrain Internal HB-90 Degree Corner	7kg	305mm	300x300mm	215mm	125/75mm	EN1433:2002	HD-Group 4 - D400
70038	Duradrain External CS-90 Degree Corner	7kg	205mm	300x300mm	215mm	0-25mm	EN1433:2002	HD-Group 4 - D400
70039	Duradrain Internal CS-90 Dearee Corner	7ka	205mm	300x300mm	215mm	0-25mm	EN1433:2002	HD-Group 4 - D400









For highway adoption all joints must be sealed. (EN1433-HA-Doc-IAN117/08 Rev 2).

Duradrain sealant should be applied around the channel body up to the road-surface/inlet level. All units have a flush face to face contact so an effective watertight seal can be achieved for every joint. For more information, please our Design & Installation Guide.



Item Code	Description	Weight	Volume	Coverage	Colour	COSHH Data
80000	One Part Low Modulus Polyurethane Sealant	2kg	600ml	10 Joints/Tube	Grey	See Downloads
80010	Sealant Applicator	4kg	N/A	N/A	N/A	N/A







### **Hydraulic Design & Data**



Duradrain 70000 Combined Kerb & Drainage HB Profile Standard Unit

Length = 500mm
Width = 215mm
Depth = 305mm
Profile = Half Batter
Designed Weir Height/Kerb-Show = 75-125mm
Usable Flow Area = 21,197mm<sup>2</sup>
Roughness Value = 0.009



Duradrain 60000 Combined Kerb & Drainage SP Profile Standard Unit

Length = 500mm
Width = 215mm
Depth = 305mm
Profile = Full Batter/Splay
Designed Weir Height/Kerb-Show = 75-100mm
Usable Flow Area = 22,182mm<sup>2</sup>
Roughness Coefficient = 0.009

For full calculations and more information on hydraulic design please visit our website or ask for our comprehensive Design & Installation Guide.







### **Design & Installation Data**

Every project, large or small, should be fully assessed so a correct installation method can be agreed and therefore full integration achieved. All projects have differing and specific demands so it is important for designers to make a full risk assessment. The position of the kerbs/drainage units, the surrounding structure/landscape, functions, road alignment, levels, specific local design criteria and the type/volume of traffic will determine a best method of installation. (Ref DMRB – MCHW Series 1100 – Series 500 - HA83/99 – EN1433 – (lan117/08 Rev 2) – EN1340 – BBA/HAPAS Certification 08/H133.



Please visit our website for more information or ask for our comprehensive Design & Installation Guide.









#### **EC Declaration of Performance**



#### Harmonised Standard EN1433:2002

Drainage channel Type M for the collection and conveyance of surface water from carriageway of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles.

Certificate Number	DD/EN101
Product	DuraDrain Combined Kerb Drainage
Strength Class	Up to and Including D400KN
	Maximum load when installed according to D400 installation guidance
Product codes	DuraDrain 70000 HB, DuraDrain 60000 SP
Manufacturers details	Econpro WDS Ltd, Unit 13 Deeside Industrial Estate, (Zone 1
	Central), Drome Road, Deeside CH5 2LR
System of Assessment	Attestation Level 3
Initial CE Mark	2016
ITT certificate Numbers	BRE Report 288125
Relevant Test Reports	BRE Report 288125
ISO9001:2008 & ISO14001:2004	TIC 15 100 148935
Reference (Factory Production Control)	TIC 15 104 141224
Material & Durability	Recycled PP/HD Polymer with Mineral Filler
Weathering Resistance	Non Hygroscopic – UV-A tested – HAPAS Cert 08/H133
Water Tightness	No leakage in accordance with 9.3.6
	BRE Test Report P102376/100
Durability	Satisfactory

Signed:-



Phil Sutton, Director

On Behalf of Econpro WDS Ltd

Declaration of Performance: Econpro WDS Ltd







#### **System/Product Maintenance & Reclaim After Life**



Dura Products are manufactured from recycled polymers and are fully recyclable after use. If units cannot be re-used, they should be stacked and wrapped securely on pallets. We can then arrange collection at our cost and return to our works to be re-made.







#### System/Product Maintenance & Reclaim After Life

- 1 Duradrain and Durachannel are designed to be integrated into varied hard-landscapes and perform the function of drainage within the channel body. After initial installation, each section of CKD/Channel should be jetted to ensure the bores are free of silt and debris. It is possible to jet from the surface through the slots/inlets working from an open access point to outlet. Outlets should also be free of silt and any obstruction. Once cleaned the access lids should be re-fitted and the locking bolts fixed securely.
- 2 The frequency and necessity for maintenance is project specific and can be influenced by factors prior to collection and at outlet discharge. If necessary, a maintenance procedure can be agreed as part of the overall drainage strategy with a full risk assessment carried out.
- 3 A visual inspection can be carried out periodically to assess the condition. It is usual to see scuff marks which will not affect the function or longevity of the product. Access lids should be checked to ensure they are locked and secure.
- 4 Where there has been a serious accident and units require replacing, new units can be cut to size and patched-in. It is important to take the repair across the extent of any damage and ensure the existing bed and brace or haunches are sound. Units can then be re-installed using Durakerb bedding mortar or a strong polymer modified mortar with adhesive properties if considered necessary.
- 5 It is important to assess the drainage function also. A visual inspection of the surrounding surfaces will generally provide evidence of pooling which could be a result of a blockage within the channel body. Any leaves, mud, and rubbish should be swept away from the inlet/slots so run-off entry is clear.







#### System/Product Maintenance & Reclaim After Life

6 - Each section of CKD/Channel should be jetted to outlet to ensure the bores are free of silt and debris. It is possible to jet from the surface and loosen any stubborn weed growth through the slots/inlets working from an open access point to outlet. Outlets should also be cleared free of silt and any obstruction and the drainage connections are sound. Once cleaned the access lids should be re-fitted and the locking bolts fixed securely.

7 – Access Lids and Gully Units are bolted and locked using M10 socket head allen keys.







Using Dura products, it is possible to design a recycled and recyclable solution for surface water across the whole of your project. Please visit our website for more information.





Econpro WDS Limited, Unit 13a, Deeside Industrial Estate (Zone 1 Central), Drome Road, Deeside CH5 2LR

