HydroKerb is suitable for city roads, car parks and urban areas.

MANUFACTURING STANDARD
HydroKerb is manufactured using a wet pressed method and tested in accordance with European Standard BS EN 1433. Top units are shot blasted to expose the aggregates.

All Aggregate Industries products are manufactured in accordance with ISO 9001 with factory compliance to ISO 14001.

PERFORMANCE
Strength: The strength requirements are met to the manufacturing standard.
Loading standard conforms to EN 1433 Class D (Class D = 400kN: Public highways and general parking areas).

COMPLEMENTARY PRODUCTS
Designed for use with Eco Countryside™ kerb.

CHARCON HYDROKERB® IS A UNIQUE DRAINAGE SYSTEM, PARTICULARLY SUITED TO CONSERVATION AREAS WHERE AESTHETIC CONSIDERATIONS ARE IMPORTANT AND WHERE A REQUIREMENT EXISTS TO MAINTAIN THE EXISTING KERB LINE.

Outstanding aesthetics with natural textured finish.
Available in Eco Countryside™ Black Fleck.
Maintains existing kerb line.
Excellent draining characteristics.
Three discrete drainage holes incorporated.
Fast to lay.

COLOUR SWATCH
1. Black Fleck

A range of radii and accessories are available. For technical details please see www.aggregate.com/hydrokerb
HYDROKERB®
LINEAR DRAINAGE

HYDROKERB SILT BOX TOP
Tested to EN 1433 Class D. Captive hinged and locking (stainless steel cap head bolt).

HYDROKERB RODDING UNIT
Load tested to category D400 of EN 1433 plus additional 10% ultimate test load. Captive hinged and locking (stainless steel cap head bolt).

Multi-purpose locking/lifting key available for use with Silt Box and inspection unit. HydroKerb crossing baseplate available in galvanised steel.

INSTALLATION

Hard landscaping to footway
Footway level
480mm max depending on base unit used
Sub base
HydroKerb base unit
25mm class 1 mortar mix 1:3
HydroKerb top
Base course
Carriage level
Sub gully pot
Standard gulley pot
Inflow unit
Sub gully top
Return flow opening

RADII

<table>
<thead>
<tr>
<th>External radii (m)</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>Internal radii (m)</th>
<th>X (mm)</th>
<th>Y (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5/6</td>
<td>875</td>
<td>900</td>
<td>4.5/6</td>
<td>900</td>
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<td>886</td>
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<td>892</td>
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<td>12/36</td>
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<td>892</td>
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</tbody>
</table>

Tops and bases for radius units are the same length. To begin laying to a radius, bases must be trimmed so both start at the same point.
## GENERAL PRINCIPLES

The aim is to ensure prompt and cost effective removal of surface water during and immediately after rainfall.

Multiple inlet holes system and continuous U-shaped channel profile enables system design.

This can provide a lower cost solution to traditional gully systems.

Note: Not suitable for carriageways carrying high volumes of fast flowing heavy vehicles.

## DESIGN PROCEDURE

When the runs to be designed have a longitudinal gradient (i.e. not laid flat) the following procedure may be used.

1. **DETERMINE DESIRED RUN LENGTH FROM DRAWING.**
   Assess area to be drained to run.
   Notes: Location of main sewer.

2. **DECIDE ON RAINFALL INTENSITY.**
   Usually either 50 mm/hr or 75 mm/hr.

3. **CALCULATE GRADIENT BASED ON PROPOSED LEVELS.**
   Choose next lower gradient from tables above if not an exact match.

4. **BASED ON CATCHMENT WIDTH, READ OFF MAXIMUM LENGTH TO OUTLET.**

5. **DIVIDE LENGTH OF DESIRED RUN BY VALUE FROM TABLES ABOVE TO GIVE NUMBER OF OUTLETS REQUIRED.**

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## SYSTEM CAPACITY

In common with all combined kerb and drainage systems, HydroKerb units will not run full due to turbulence from the inlet holes. System flow capacities given are, therefore, confined to realistic flow levels rather than theoretical/full bore maximum levels.

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### RAINFALL INTENSITY (50MM/HR)

<table>
<thead>
<tr>
<th>Gradient</th>
<th>Catchment width = 5m</th>
<th>Catchment width = 10m</th>
<th>Catchment width = 15m</th>
<th>Catchment width = 20m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>flow (l/s)</td>
<td>length to outlet (m)</td>
<td>flow (l/s)</td>
<td>length to outlet (m)</td>
</tr>
<tr>
<td>1:1000</td>
<td>8.06</td>
<td>116</td>
<td>8.75</td>
<td>63</td>
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<tr>
<td>1:500</td>
<td>10.28</td>
<td>148</td>
<td>10.56</td>
<td>76</td>
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<tr>
<td>1:200</td>
<td>14.17</td>
<td>204</td>
<td>14.03</td>
<td>101</td>
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<tr>
<td>1:500</td>
<td>26.67</td>
<td>384</td>
<td>25.83</td>
<td>186</td>
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</table>

### RAINFALL INTENSITY (75MM/HR)

<table>
<thead>
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<th>Catchment width = 15m</th>
<th>Catchment width = 20m</th>
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<tr>
<td></td>
<td>flow (l/s)</td>
<td>length to outlet (m)</td>
<td>flow (l/s)</td>
<td>length to outlet (m)</td>
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<tr>
<td>1:1000</td>
<td>8.54</td>
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<tr>
<td>1:500</td>
<td>10.42</td>
<td>100</td>
<td>10.63</td>
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<td>1:200</td>
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<tr>
<td>1:500</td>
<td>26.25</td>
<td>252</td>
<td>25.21</td>
<td>121</td>
</tr>
</tbody>
</table>
SUSTAINABILITY AND LOCAL SOURCING

ENERGY USE: Aggregate Industries is at the forefront of sustainability and has committed to reduce carbon emissions by 20% by 2016 based on a 2012 base line.

RECYCLABLE: 100% of the product can be recycled thus reducing the amount of material that is sent to landfill.

MANUFACTURING LOCATION:
Produced in the UK, with locally sourced materials under strict environmental and social legislation, for local supply.

RESPONSIBLE SOURCING: Aggregate Industries is the first company in the world to achieve a BES 6001:2008 Responsible Sourcing Certificate from BRE Global. Products are assessed on:
- Quality management.
- Environmental management.
- Health and safety management.
- Greenhouse gas emissions.
- Minimising raw material usage.
- Labour practice.
- Biodiversity.

LIFE
Life is our range of sustainable products and services. For more information please visit www.aggregate.com/life

KEY AGGREGATE AND RECYCLED CONTENT
Hydrokerb top units are manufactured using a high quality granite aggregate. Base units are manufactured from polymer concrete based on polyester resin.

GENERIC GREEN GUIDE RATING*
Not applicable.

POLICIES
Aggregate Industries’ policies on the environment and community, health and safety and sustainable solutions for different product applications can be viewed on our website www.aggregate.com

INSTALLATION STANDARD
Install in accordance with Aggregate Industries recommendations. For specific guidance refer to www.aggregate.com or call the technical helpline on 01335 372222.

MAINTENANCE AND CLEANING
Aggregate Industries can supply on request advice on specific stain removal and general maintenance, suitable cleaning products, referrals to specialist cleaning companies.

COSHH DATA
Full COSHH data on the Charcon range of products is available on request. Please call the technical helpline on 01335 372222.

TECHNICAL SUPPORT
DETAILED GUIDANCE AND ASSISTANCE WITH THE PREPARATION OF SPECIFICATION OF THE CHARCON RANGE OF HARD LANDSCAPING PRODUCTS, INCLUDING MODEL CLAUSES, IS AVAILABLE THROUGH THE SALES OFFICE. A FREE TECHNICAL DESIGN SERVICE IS ALSO AVAILABLE.

FOR FURTHER INFORMATION, PLEASE REFER TO OUR TECHNICAL SERVICES ON 01335 372222.

* Ratings based upon generic green guide values (2009) supplied by BRE Global Ltd, www.thegreenguide.co.uk

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