

GATIC

DRAINAGE & ACCESS COVERS



Gatic Kerbdrain Installation Guide



Features & Benefits

Gatic Kerbdrain is installed in the traditional manner and no additional training is required. When you specify Gatic Kerbdrain into your project you are choosing a product/system and methods of installation that significantly reduce impact on the environment and everyone involved across the whole installation process.



30,676kg of Carbon is saved for every 1000metres of Kerbdrain installed

PAS2050 Independant Study (Sustain Ltd)

There are 182 bottles caps and closures in an average Kerbdrain standard unit and over 400,000 units sold to date. That is over 72 million recycled bottles fixed within kerb-lines across the UK ready for re-use.



Our install process reduces risk of lung disease and musculoskeletal disorders, the main priorities embedded within the CDM Regulations (2015).

Installation

For optimum performance and full compliance Gatic Kerbdrain must be installed as per our instructions. With kerbing generally, impacts are more frequent in low-speed parking/stopping areas, roundabouts and over-runs so to reduce risk, it is best to check and assess each section of kerbing and its function across a project and chose a suitable method of installation and integration. In areas that are particularly exposed or you expect likely over-runs then it is good practice to ensure the brace is high and strong so it supports impact from the front and rear of the unit.

Site geography, operational challenges and conditions can vary, even in plots of the same design and it is not always possible to position collection away from risk so the load performance required across a project can be variable. A full risk assessment across a project will ensure a best installation and integration. The position of each section, the surrounding structure/landscape, road alignment, levels, specific local design criteria and the type/volume of traffic/loading should be fully assessed. (For Reference see DMRB - HA83/99 & MCHW Series 1100/500)

It is important to note that because combined kerb and drainage systems are hollow they should not be installed in a standard kerb detail. This advice is consistent with most other CKD systems available and within DMRB guidance for the design of road-edge drainage features.

Ref - HA83/99 - Safety Aspects of Road Edge Drainage Features

“7.2 Where drainage and kerb systems may be subject to vehicle over-run care should be taken to ensure that the system is designed both for accidental loading and impact. Because combined drainage and kerb systems are by their nature hollow, they may not be as robust as solid kerbs of the same general dimensions.”

The Gatic Kerbdrain system is installed similar to traditional BS-EN1433 monolithic concrete/ polymer concrete CKD systems. Gatic Kerbdrain brings added advantages to the whole installation process, from an easy and effortless set-out, to a simple and quick process of lay. Gatic Kerbdrain also helps to mitigate your obligations under the Construction Design & Management Regulations 2015 with all standard units well below the threshold for manual handling. This allows a much quicker install.

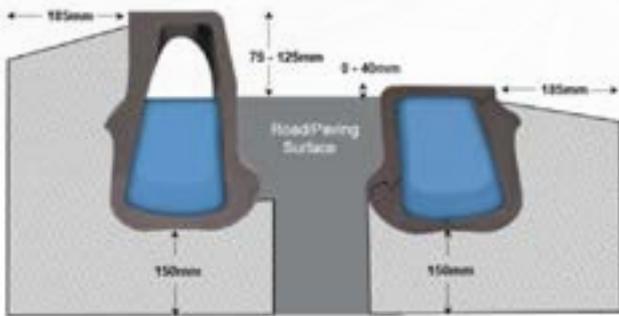
Iron Gully Units do require an assessment under the CDM regulations. The weights and dimensions are stipulated in our technical literature and are accurate as of April 2021. When necessary we will revise information and list on our website if the changes present an increase in risk. If in doubt please contact us.

Installation

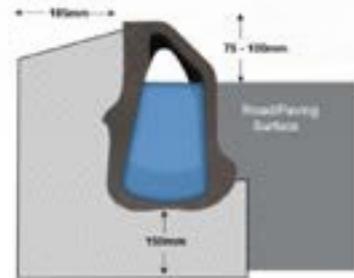
When cutting standard units a (P1) dusk mask must be worn and all necessary PPE workwear.

When setting out, it is important to check the kerb-heights across each section of CKD. Gatic Kerbdrain is available in Half Batter and Full Batter/Splay Profile, each with inlet windows set within the range of kerb heights shown below.

Kerbdrain HB Height & Dropped Standard Detail

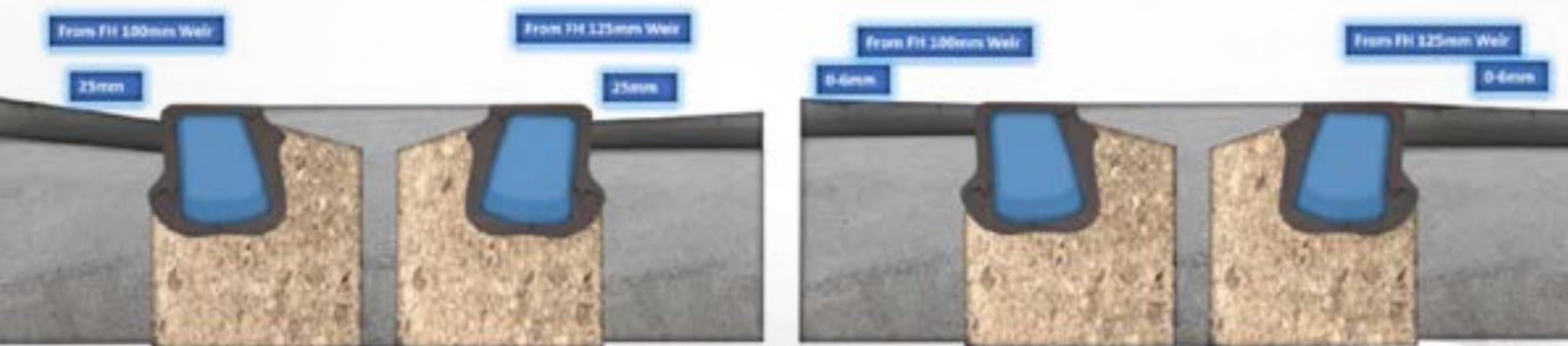


Full Batter/45 Degree Splay Standard Detail



Where there are changes in function affecting kerb-heights within a section, 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 (MCHW-1100 series, DMRB - HA83/99).

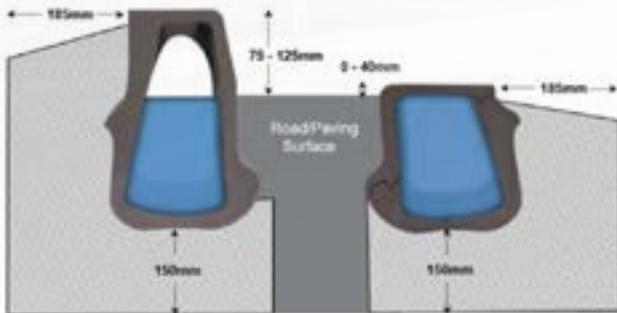
The differing kerb heights are fundamentally changes in the relationship between the road and pavement level and in most situations the top of the kerb unit will be fixed, level with the pavement backing. The channel invert can be maintained through drop sections from variable heights to variable upstands by either rolling surfaces up or down across the transition.



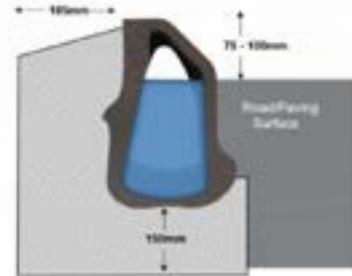
Installation

Once the line and levels are determined, installation can commence. Setting out is carried out generally as with a standard BSEN1340 kerb however a deeper excavation is generally required to accommodate the channel body and a 150mm minimum bed of concrete.

Kerbdrain HB Height & Dropped Standard Detail



Full Batter/45 Degree Splay Standard Detail



In all instances the excavated foundation must be well compacted and sound before the bed is laid.

All units within a run should be laid out in position. End Caps should be sealed and fitted before you begin installation. You can install Gatic Kerbdrain sections from the head of the run or from the outlet back. Site conditions, position and restrictions can determine different methods of pouring the bed and brace, here we recommend a best method however other methods can be considered as long as they are equal in strength and deliver an equal integration.

For best compaction and reduced waste, formers are recommended and the bed can be poured separately or as one with the brace/backing. Please see our installation examples for details on the minimum strength and class of concrete. If installing a separate log/chase, units can then be installed on a mortar bed with the brace suitably tied in for a robust detail.

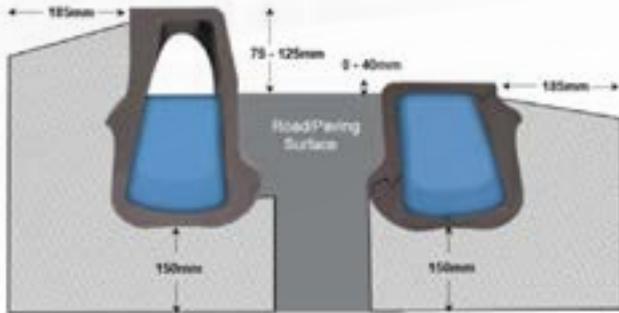
We recommend each section of CKD should start with an access point at the head of the run to allow jetting/cleanout. Access points are fitted with removable stoppers for a shallow 150mm connection, if used as an access only then the stopper should be removed, sealant applied and re-fitted. We also recommend access points are placed at intervals of 40-50mtrs subject to site conditions and any ongoing maintenance strategy. Sealed end caps should be fitted at the head/start of any section of CKD.

For adoption within highways all joints must be sealed (EN1433 - IAN117/08 Rev 2). The sealant is applied to each unit before it is presented. Using a rubber maul, the units can be hammered together in line and level and any excess sealant can be smoothed-off. For functionality, the sealant is only required around the channel body up to the road surface/inlet level.

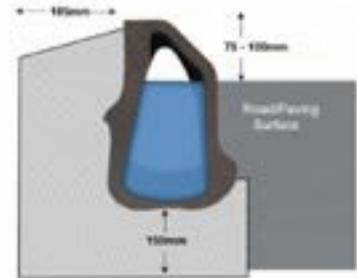
Installation

Gatic Kerbdrain is manufactured to the required strength as stipulated in EN1433 - 2002 (Load Category 4 - Heavy Duty D400). Load performance can be enhanced further by installing within a robust detail. It is important for the designer/contractor to assess risk relevant to the volume and type of traffic expected, the road alignment and any relevant factors such as kerb heights/ profiles, road/pavement design and chosen method of installation.

Kerbdrain HB Height & Dropped Standard Detail



Full Batter/45 Degree Splay Standard Detail

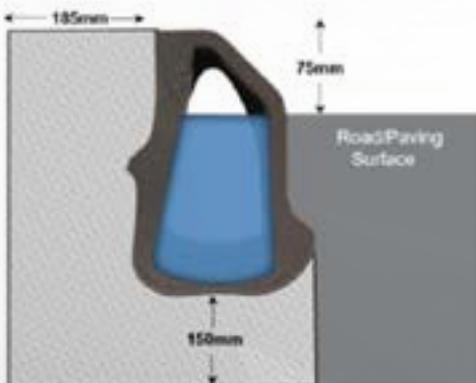


For bedding, a ST4 mix (C25/20) with 25mm slump (150mm Minimum Depth) is the minimum requirement.

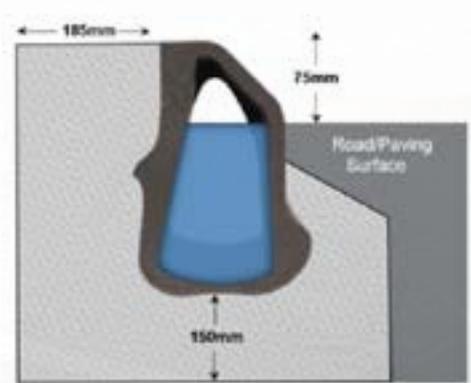
For brace/backing, a ST4 mix (C25/20) with 50mm slump (185mm Nominal Width) is the minimum requirement. The rear brace/backing should be installed as high as possible.

Gatic Kerbdrain one-part polyurethane sealant should be applied to each joint. For higher risk areas with narrow alignments, roundabouts and external curves the brace/backing should be installed to the full height and width. For large projects with multiple phases, the front face of the CKD should be protected if open to traffic before final surfacing is complete. Alternatively, you can install with a protective dual haunch.

Typical Full Height Backing



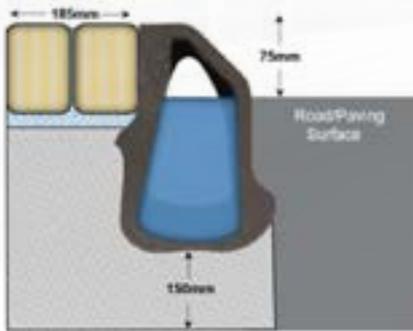
Typical Dual Haunch



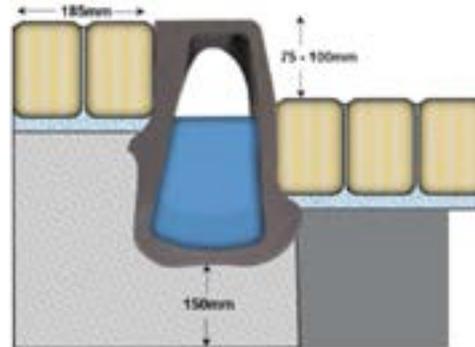
Installation

The rear brace/backing can be squared-off to allow integration into varied slab and block paved surfacing. Across the width of the rear brace, block-paving should be bedded in a strong mortar for a robust joint/detail. For asphalt and flexible pavements, Gatic Kerbdrain's standard detail can also be tapered to allow a sufficient depth of surfacing to be rolled tight and compact to the rear of the unit.

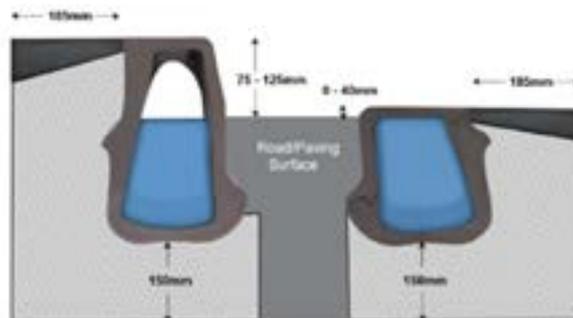
Typical Paving Detail



Typical HB Paving Detail



Typical Flexible/Asphalt Detail



The bed and brace detail should be fully installed to the extents of each section, through drops, transitions and access points.

Please note that there may be a requirement for the management of expansion/contraction within the surrounding structure. This is generally project specific and must be assessed by the designer/engineer/contractor.

Kerbdrain gully outlets are seated and bedded over standard highway road gullies (Installed as per manufacturers instructions)

We advocate the use of hand tools when cutting to eliminate respiratory concerns. A (P1) dust mask must be worn when cutting and any resulting swarf can be collected as part of a project's waste management plan.

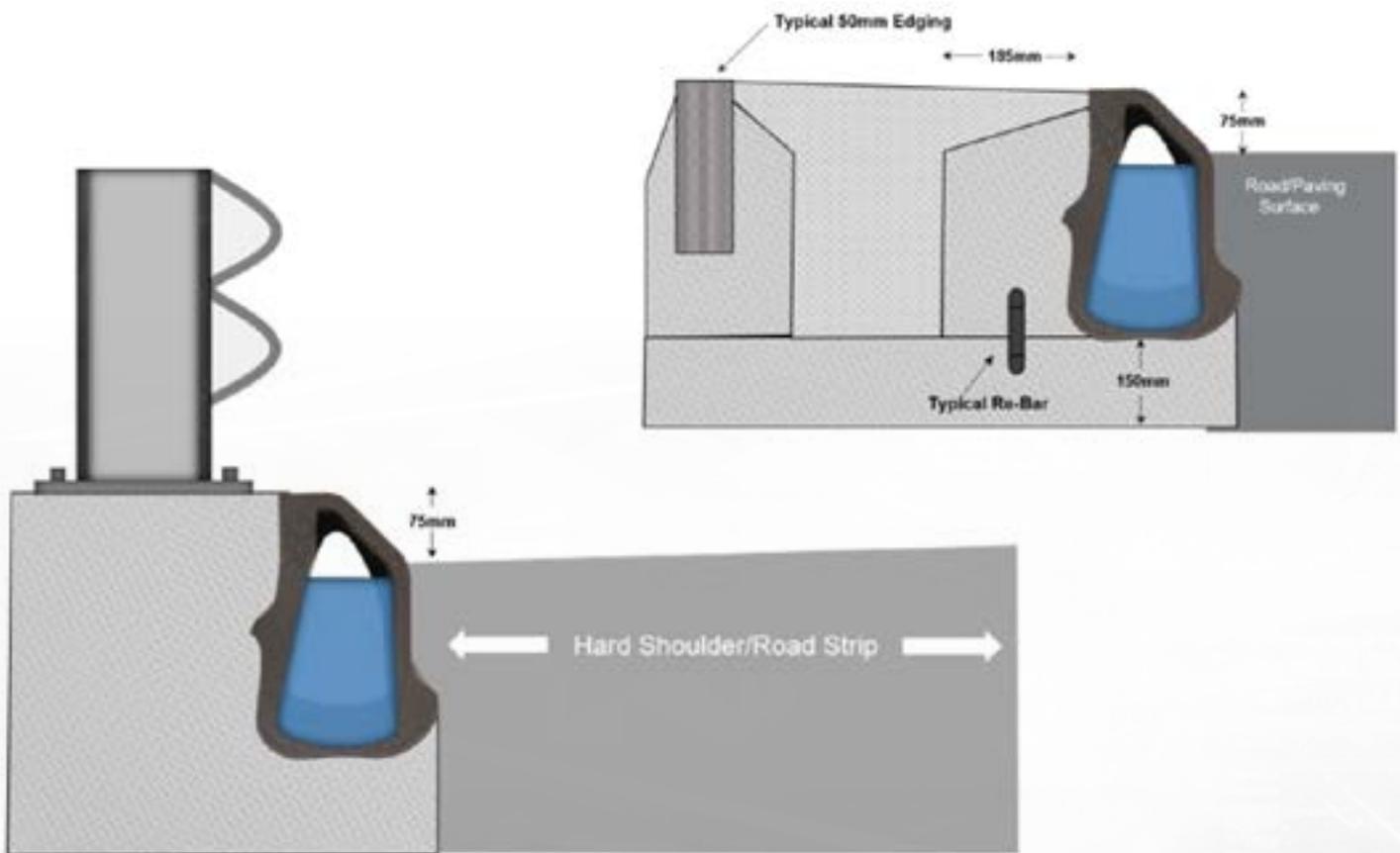
Installation

The key to the success of any surface drainage system is its installation and integration. A system has to be installed correctly and then integrated within varied surfaces across the project which can often have different operational challenges. A precise quality finish during installation with sound integration between the product, system, bed, brace/backing and landscape/surfacing will ensure optimum performance and longevity.

For the best integration, it is important for designers to fully assess the risks of likely impacts/loadings and where necessary increase the strength of the detail. The method of lay/pour for both bed and brace/backing can be project specific and should be assessed by the designer and contractor to ensure a best installation and integration is chosen.

Resistance to impact and load is not limited to the compressive load strength of each standard unit. The choice of detail and its integration are fundamental to a system's load performance on site.

Typical Robust HD Integration



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DRAINAGE & ACCESS COVERS

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