

## KerbDrain clears surface at pace

*ACO KerbDrain provides high performance SUDS solution on busy Nottingham commuter route.*



Highways engineers at Nottinghamshire County Council have turned to ACO Water Management's award-winning combined kerb drainage system, ACO KerbDrain, to create a high performance sustainable drainage solution for a challenging stretch of the A612 through Burton Joyce.

Forming part of a major project to refurbish a failed one mile section of carriageway through the village, continuous runs of ACO KerbDrain link directly to a series of soakaways to ensure that all run-off is safely removed as quickly as possible, curing a hazardous standing water problem that had existed on adjacent, lower-lying side roads and residential driveways.

The A612 is a busy arterial route serving Nottingham. Widened in the past, the section through Burton Joyce had begun to fail – a situation that was accelerated by the differential construction of the road sub-structure and by poor drainage arising from the virtually flat profile of the carriageway surface.

**Project:**

A612 Burton Joyce.

**Objective:**

Implementation of SUDS scheme with capability of removing surface water quickly from busy carriageway.

**Brief:**

1. Collect and convey surface water run-off to prevent any standing water build-up.
2. Support installed soakaways with additional attenuation capacity.
3. Minimise both in-carriageway and below ground infrastructure.

**Solution:**

Continuous runs of ACO KerbDrain 305 along each side of the carriageway provide rapid and even removal of all surface water. Runs combine with ACO KerbDrain gully units to give required attenuation capacity and simple, clean onward connectivity to soakaways.

Recognising it needed to significantly improve drainage provision as part of the refurbishment works, the team from Nottinghamshire County Council conducted an extensive survey of the area. Finding that there was no positive outfall for the run-off generated from the road surface, it looked at a sustainable solution based on soakaways located under the grass verges behind the kerb line on each side of the road.

"We looked at two possible solutions: a system based on road gullies and the other on combined kerb drainage," says David Collins, Project Engineer at Nottinghamshire County Council Highways Department. "The volume of passing traffic through this relatively narrow section of highway would have subjected a conventional gully system to a high frequency of over-runs, exposing it to a significant risk of damage. The ACO KerbDrain solution removes

any such exposure and its inlet configuration allows for a faster, more even removal of surface water. The system also reduces the extent of ground excavation and pipe infrastructure – lowering total installed cost."

### KerbDrain gully unit

Close to 1100 metres of mid-capacity ACO KerbDrain 305 has been installed. Connections to the soakaways have been easily made using the KerbDrain gully unit which has standard-sized punch-out sections to accommodate the short runs of carrier pipework. The gullies, which have identical inlet profiles to that of the standard KerbDrain stones, also act as catch-pits, preventing any debris carried in the run-off entering the soakaways.

Certified to Load Class D 400, ACO KerbDrain is the only one-piece combined kerb drainage system to carry the British Standard Kitemark™. The range is available in three standard depths: 480mm, 305mm and 255mm. The vertical faces of every unit are cast with a series of unique 'cut-aways' that, in addition to creating a stronger bond with the surrounding substrate, reduce the volume of material used – a key feature of sustainable manufacturing.

### Accessories

The accompanying range of ACO KerbDrain accessories includes perforated and flush centre stones, splay kerbs, radius units, 90° internal and external quadrants, drop curb assemblies and bus stop kerbs. All meet the same specifications and standards as those required for the standard stones.

ACO KerbDrain was first launched in 1998. Its unique design revolutionised highway drainage and brought ACO Water Management the first of its two Queen's Awards for Innovation. Since it was first introduced the range of KerbDrain products has been extended to cover all highway applications and now includes over 60 individual products.



ACO KerbDrain Drop Kerb units allow continuous drainage runs to continue unbroken across road-level pedestrian crossings.



Soakaways set beneath the grass verges return surface water run-off from the carriageway to ground at a safe rate.

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