Hartlepool Borough Council: Burn Valley Gardens

Project Details:

Client: Hartlepool Borough Council

Contractor: BCE Northern Ltd

Location: Burn Valley Gardens, Hartlepool

Scheme: TVCA Town Centre to Catcote Road Cycle Route

Application: Cycle Route & Park Path Drainage

System Used: Grip Strip 100mm

Project Overview

Burn Valley Gardens is a historic Edwardian park following the course of a channelised burn through residential Hartlepool. As part of Hartlepool Borough Council's Town Centre to Catcote Road cycle route - one of the Tees Valley Combined Authority (TVCA) cycle schemes - the park's terraced paths off Colwyn Road were renewed, and 600m of Grip Strip drainage units were installed to solve a long-standing runoff problem that was eroding the embankment and undermining the park's original stone retaining walls.

Working with contractor BCE Northern Ltd, the terraces were resurfaced in porous asphalt laid to falls, so that rainwater passing through and across the surface is directed to flush Grip Strip drainage lines at each terrace edge. The strips collect the water and carry it to discreet outlets cut through the existing walls, taking it safely down the slope to Burn Valley Beck.

The result is a fully draining path network with no gullies or gratings to maintain, no standing water, and controlled outfalls in place of the uncontrolled runoff that was washing out the banks - delivered without deep trenches, without heavy excavation plant, and without disturbing the roots of the mature trees that line the paths.

The Challenge

- Uncontrolled runoff from the terraced paths was scouring the grass embankment and washing out material from behind the park's historic stone retaining walls
- Heritage structures - deep excavation for conventional piped drainage alongside the old walls risked disturbing their foundations
- Mature tree roots spread beneath the path edges throughout the park - traditional drainage trenches would have cut straight through them, and the large excavation plant needed to dig them would have compacted root zones and torn up the surrounding parkland
- Heavy leaf litter beneath the park's mature trees would quickly block conventional gullies and gratings
- Public open space demanded a flush, trip-free finish safe for pedestrians, buggies, bikes and mowers
- Steep terraced site - water needed collecting and conveying to the burn at the valley floor in a controlled way

The Solution

- **Full-depth porous construction laid to falls** - 30 mm porous asphalt surface course and 70 mm porous binder over an open-graded sub-base, directing rainwater through and across the surface towards the drainage lines
- **600m of flush Grip Strip** drainage units - slimline 100 × 200 mm recycled rubber blocks installed directly into shallow gravel-filled trenches, typically just 250 mm deep, staying above the tree roots that conventional drainage trenches would have severed
- **Compact plant, minimal damage** - the shallow trenches were excavated with small machinery rather than the heavy construction plant deep piped drainage demands, keeping disturbance to root zones, lawns and established planting to a minimum
- **Interceptor lines at every terrace edge**, capturing runoff before it reaches the embankment
- **Discreet outfalls to Burn Valley Beck** - Stakkabox catchpits set beneath the Grip Strip runs, with 100 mm pipes down the embankment and vitrified clay outlets mortared through the beck wall
- **Gravel and cobble dressed finishes** blending the drainage lines into the park landscape

Results

✓ Runoff captured at source on every terrace, ending the scour and washout that was damaging the embankment and walls

✓ Heritage retaining walls protected - the shallow 250 mm trenches avoided disturbing wall foundations

✓ Mature trees unharmed - shallow trenching stayed above the root zones, avoiding the root severance that deep drainage trenches would have caused along the tree-lined paths

✓ Flush, trip-free finish throughout - safe for all park users and maintenance machinery

✓ Nothing to block - the porous rubber strips have no gratings or slots for leaf litter to clog

✓ SuDS-friendly drainage using porous surfacing and recycled rubber, discharging at a controlled rate to the watercourse

✓ Rapid installation alongside the resurfacing works, with drainage lines trenched, laid and dressed in the same visits using only compact plant




Why It Matters

Parks and greenways are difficult places for conventional drainage. Gullies clog with leaf litter, channels and gratings introduce trip hazards, and traditional piped drainage means deep trenches - cutting through the roots of established trees, running hard against heritage foundations, and bringing heavy excavation plant onto the very landscape the scheme is meant to protect. In a mature park, that construction damage can outlast the problem the drainage was built to solve.

At Burn Valley Gardens, pairing full-depth porous construction with flush Grip Strip delivered a drainage scheme that is effectively invisible: water disappears through the surface, travels along the shallow rubber strips, and re-emerges only at controlled outfalls into Burn Valley Beck. Because the strips sit in trenches typically just 250 mm deep, dug with compact plant, the trees, root zones and heritage walls came through the works untouched. Maintenance is minimal, and the park keeps its character.

The same approach - Grip Strip's slimline 100 × 200 mm pressed rubber profile installed straight into the ground, suits footpaths, cycleways, embankments and any landscape where water needs intercepting without deep trenches, heavy plant or heavy civil engineering.

> *"Runoff from the terraced paths had been damaging the embankment and washing out material from behind the park's original retaining walls for years, but in a mature Edwardian park, deep trenches for conventional piped drainage were never an option. Grip Strip let us intercept the water at every terrace edge from shallow trenches dug with compact plant — the heritage walls and tree roots were untouched, and the flush finish is safe for everyone who uses the park. There are no gullies or gratings to clear, and the drainage lines blend in so well most visitors won't know they're there.*
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Contact us:

Work with our specialist drainage team to solve your water management challenges in demanding infrastructure environments.

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