

## **How do modular drainage system installations compare to traditional drainage systems?**

Modular drainage systems have been engineered to minimise ground disturbance and require minimal installation time.

Traditional drainage systems usually require a large drainage trench to be excavated along the length of paths and cycle ways which is then typically filled with quarried stone and plastic pipe.

Modular drainage systems can be installed in depths as shallow as 100 to 300mm. The surface water run-off is effectively managed at source, using spurs to create small soakaways integrated into the natural landscape and hedge lines.

This process is quicker and causes less disruption to the public, the environment, and local wildlife.



## **How has the material been developed and how does it reduce carbon by up to 50%?**

Modular drainage systems are engineered from cold-cure encapsulated recycled tyre rubber and use a minimum excavation approach to path construction. Traditional drainage methods use timber edges which rot and path drainage that requires a large trench excavation, filter stone, and perforated pipe drains that deteriorate in a short space of time. Modular drainage systems enable drainage designs and installation practices that can reduce carbon by up to 50% – a practical, scalable solution that is better for the local wildlife and the environment.

## How does modular drainage systems ensure effective water drainage in areas that have problems with flooding and muddy/waterlogged ground?

Modular drainage systems should be installed as part of an integrated solution to whole-system drainage approaches.

Within the drainage design details of an area being addressed it provisions an avg. 45% void space and impressive permeability of 49 litres/metre-sq/sec.

The drainage units respond to heavy rainfall and flooding with far greater hydraulic conductivity, immediacy and persistence compared to traditional materials, such as filter stone and perforated pipes.

Because the system reacts to the water faster than traditional materials it can disperse heavy rainfall and storm events more immediately and mitigate the risk of flooding.

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## Are there other applications for modular drainage systems in town and rural space planning, design and build?

Modular drainage systems are versatile and have many applications.

They can be used in:

- Land boundary drainage
- Crests and interception drains
- Filter drains and linear drainage
- Ditches and swales
- Embankments and slopes
- Rip-Rap and aprons
- Spillways and toe drains
- Narrow verges
- Back of wall drainage
- Gabion integration
- Retaining structure frontage
- Culverts and headwalls
- Driveways and edges
- Permeable surface, block paving and sub-base drainage integration
- Raingarden sediment control, infiltration and drainage integration

## Why do planners and engineers choose modular drainage systems?

The versatile range of drainage units combined with the unique material properties enables planners and engineers to significantly enhance:

- Design and build safety and risk management
- Project planning, designs and approvals
- Land use, and use of land in constrained spaces
- Flood and climate change resilience
- Temporary works design and planned construction efficiencies
- Drainage designs, drainage connectivity and value engineering
- Outfall, soakaway and attenuation drainage design options
- Storm, sustainable, surface & groundwater drainage:
  - Integration
  - Performance
  - Durability
  - Longevity

### Planners and engineers also benefit from significantly reduced:

- Planning, design and construction constraints
- Excavation (by using a 12" Bucket, or less)
- Filter stone (modular drainage units have an avg. 45% void ratio)
- Perforated pipes and concrete channels
- Weight lifting and handling
- Maintenance frequency
- Whole-life costs
- Carbon footprint

### Proven Performance

- Installed on over 1km of NCN Route 6 with proven results
- Kilometres of sustainable drainage plans for cycle paths approved for live schemes
- The system is proven in real-world deployments across a range of transport and civil engineering projects.

**Want to explore how  
Modular Drainage Systems can  
support your project?**