



Frequently asked questions

How does the Hydrotrench 'no dig' installation compare to traditional drainage systems?

Hydrotrench has 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.

Hydrotrench is a no-dig solution. The surface water run-off is effectively managed at source, using spurs to create miniature soakaways, integrated into natural hedge lines and landscapes.

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%?

Hydrotrench is engineered from recycled tyre rubber and uses a no-dig installation 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 to achieve the same results. Hydrotrench enables drainage designs and installation practices that reduce carbon by up to 50% – a practical, scalable solution that is better for the local wildlife and the environment.



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

Hydrotrench 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.

Hydrotrench responds to heavy rainfall and flooding with far greater hydraulic conductivity, immediacy and persistency compared to traditional materials, such as filter stone and perforated pipes.

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

Are there other applications for Hydrotrench in town and rural space planning, design and build?

Hydrotrench is versatile and has lots of applications. It 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



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Why do planners and engineers choose Hydrotrench

The versatile range of Hydrotrench units combined with its unique properties enables planners and engineers to significantly enhance:

- Design and build safety and risk management
- Project planning, designs and applications
- 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 (Hydrotrench has an avg. 45% void ratio)
- Perforated pipes and concrete channels
- Weight lifting and handling
- Maintenance frequency
- Whole-life costs
- Carbon footprint

Technical Validation

- Hydrotrench reached TRL 9 – proven for real-world deployment
- Included in national infrastructure catalogues for broader roll-out
- Installed on ~1km of NCN Route 6 with proven results
- Kilometres of sustainable drainage plans for cycle paths approved



Want to explore how Hydrotrench can transform your public spaces?

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