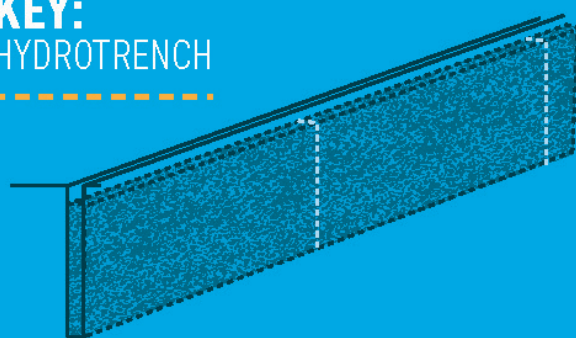


HYDROTRENCH DRAINAGE SYSTEM



KEY:
HYDROTRENCH



HYDRO
TRENCH



ROUDEN PIPETEK

HYDROTRENCH PROVIDES A TARGETTED AND MODULAR DRAINAGE PANEL SYSTEM THAT WILL PERMANENTLY TRANSFORM HOW YOU SOLVE DRAINAGE FOR GARDENS, PATIO / PAVING AND DRIVEWAY EDGES.

Stunning Benefits

- ★ Manufactured in the UK using up to 90% or greater recycled polymers
- ★ Long-lasting, no compaction, no pipe blockages and no pipe breakages
- ★ Rapid installation
- ★ Works in any soil type (including clay)
- ★ Primary system and / or rejuvenates failed or damaged drainage systems
- ★ Superior reliability, more efficient and fewer materials than traditional drainage methods

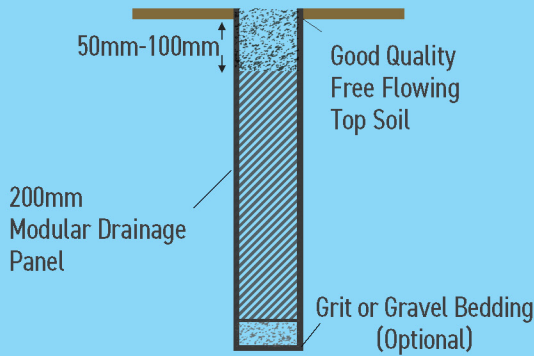
The 'Big Win' For Housebuilders and Groundworkers

- ★ Waterlogged home gardens, patios, paved areas and driveway edges can now be drained more efficiently and with long-lasting effect.
- ★ Silt traps can be replaced by 'stacking panels' laid flat at the end of the run to facilitate outfall connection.

How 'Modular Drainage Panel Systems' Work

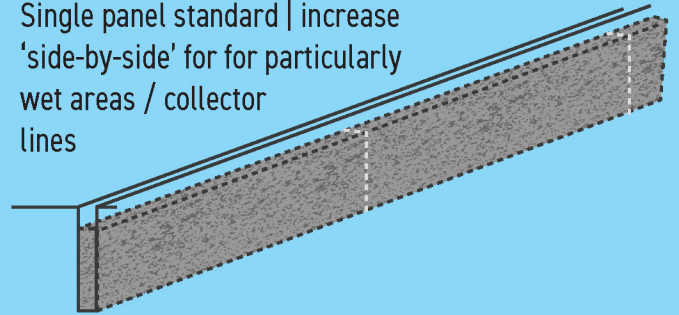
- ★ They are installed into the ground and take water away from where you don't want it... to where you do!
- ★ Because the system is 'modular' you can piece 'panels' together and cover any size of surface you want.
- ★ The incredible compressive strength keeps a permanent, open channel available for water and silts to flow along panels using hydraulic pressure.
- ★ Each panel works like a 'stent' in the ground, creating a path of least resistance that will not crush or block, even in the most challenging environments.

PROFILE AND LINKING



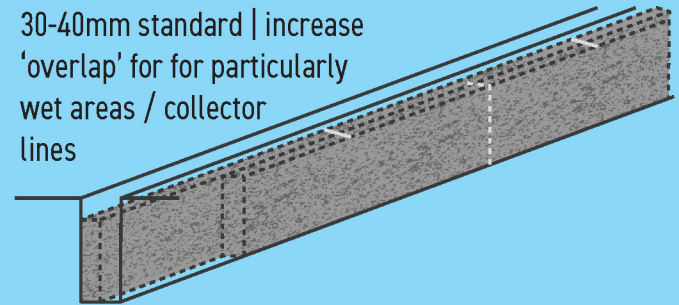
BUTT JOINT

Single panel standard | increase 'side-by-side' for particularly wet areas / collector lines

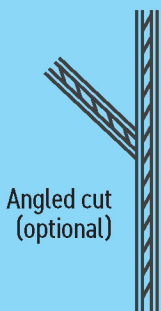


LAP JOINT

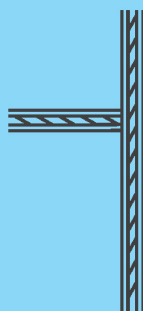
30-40mm standard | increase 'overlap' for particularly wet areas / collector lines



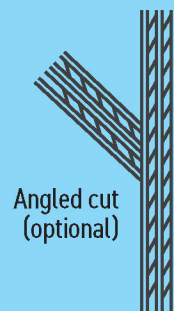
Single 45°



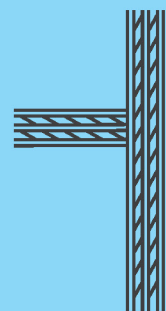
Single 90°



Double 45°



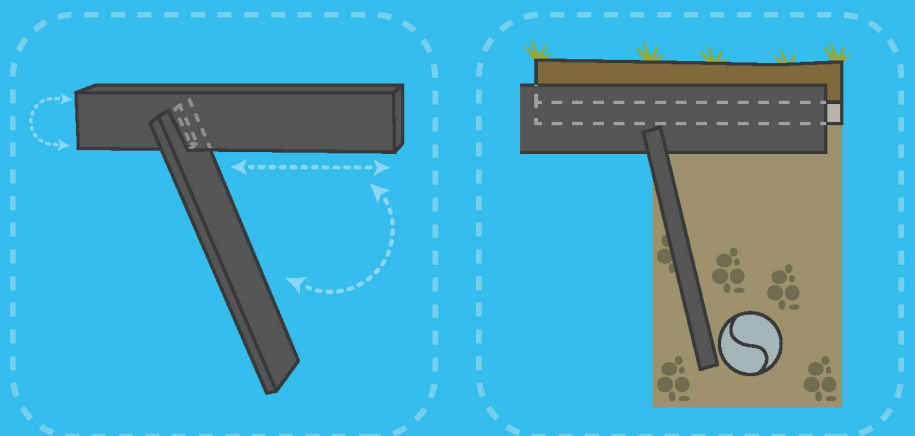
Double 90°



CONNECTION

Connect Hydrotrench system outfalls directly into the pea gravel layer of existing drainage and/or into suitable outflow point.

Control options ahead of outfall connection can include 'stacking panels' laid flat to replace silt traps and/or silt traps, attenuation crates, storage tanks and pump systems, subject to budget and the specifics of the site.

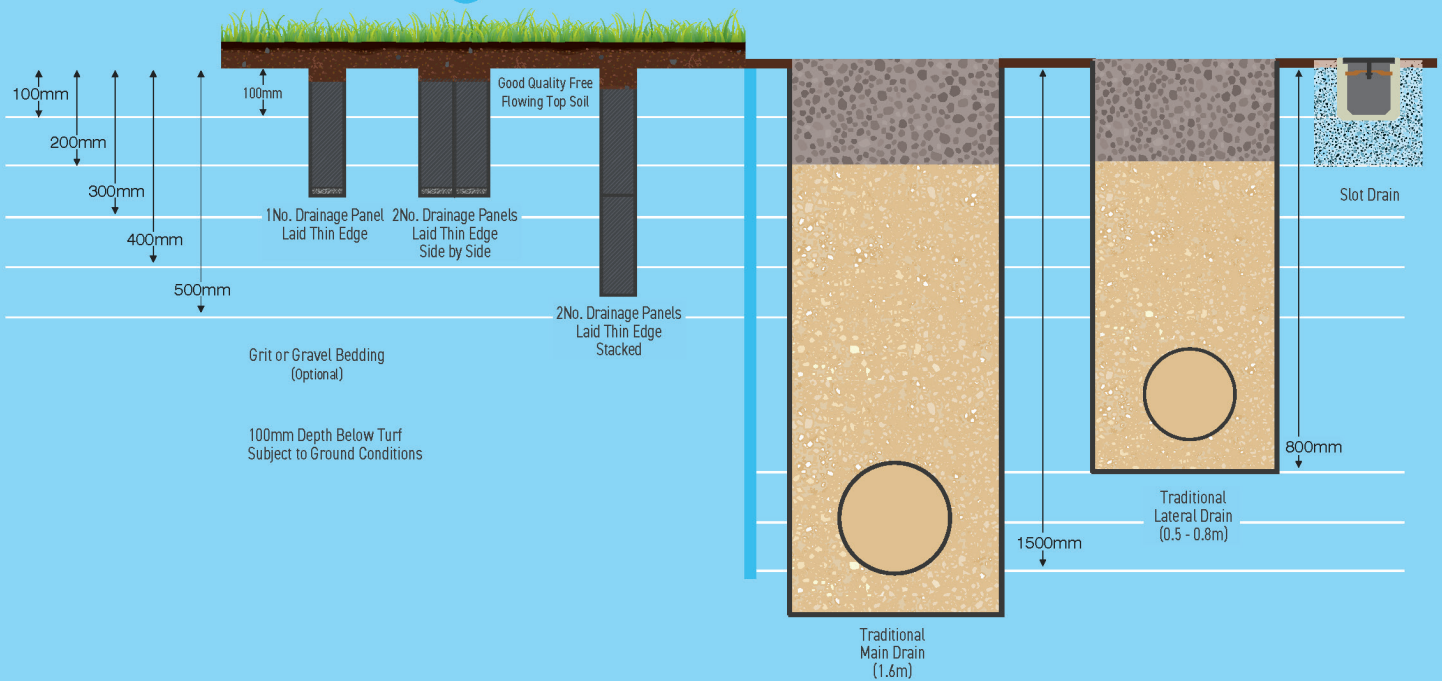


(Illustrative Drawings)

HYDROTRENCH VS. TRADITIONAL DRAINAGE METHODS



vs TRADITIONAL DRAINS



FAILED EXISTING DRAINAGE SYSTEMS ARE BROUGHT BACK FROM A WATERY GRAVE



THE PROBLEM | Severely Compacted Clay Ground

THE SOLUTION | Hydrotrench Drainage System

Hydrotrench drainage systems are a superior alternative to other traditional drainage methods, in addition they can be used to:

- Release surface water down into existing systems that are failed or failing due to compaction above.
- Repair and patch around collapsed / broken areas of pipe drainage.
- Act as a silt control layer to dramatically reduce maintenance and lifecycle costs.

Hydrotrench remediation techniques are particularly effective in **clay ground** or **racecourses** that suffer from heavy compaction and frequently require costly maintenance and repairs.

CASE STUDY

CLIENT: MAJOR HOUSEBUILDER, LEEDS, YORKSHIRE

The Challenge: Properties situated at the foot of a large slope were backed onto by a row of rear garden plots belonging to other properties higher up the embankment. Rainfall and surface water was making its way downhill to the gardens situated in the “lower ground”, creating major issues with waterlogged gardens and flooded patios. Traditional French drains and slot drains could not be installed without a complete overhaul, neither would these methods have been able to tackle the severity of the drainage issues.

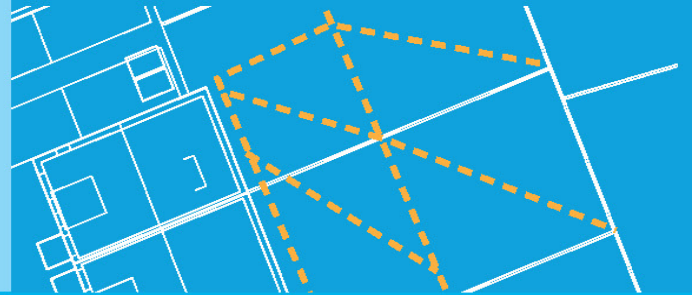
Solution: Hydrotrench drainage system three-tiered approach

1. Surface water run-off from the adjoining gardens, higher up the slope was intercepted, by running Hydrotrench close along the boundary fence line with an impermeable membrane on the downslope.
2. The rear garden patios of the lower ground properties required urgent drainage intervention. The Hydrotrench drainage system was run up to, and along the edge of the patio hardstandings with an impermeable membrane installed along the property side of the channel, ensuring surface water would immediately be taken down below the surface, and away into the pea gravel bed of the existing drainage.
3. Finally, interception drainage was created using Hydrotrench in both the upper and lower sections of the plot. Each drainage run was linked together using drainage panel cross-spurs, dispersing the flow of surface water across the fall of the entire site and reducing the outfall pressure placed on onward drainage connections.





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HYDROTRENCH 200

200 x 40 x 1000mm

Disclaimer: 10% margin of tolerance.

Photographs shown are representative of the Hydrotrench range and may vary in density, colour and appearance.



SITE INSPECTION / ASSESSMENT: check site access, safety hazards, soil condition above and below ground, utilities, cables, pipes, obstructions and rubble, land topography and gradient, natural springs (require 3-4 panels side by side), location of paving/patios/hardstanding foundations, Hydrotrench outfall options, connection points, existing drainage ownership and regulation compliance.



DESIGN LAYOUT / KEY PRINCIPLES: intercept rainfall and runoff at the highest point of raised land utilising fences and boundary lines with Hydrotrench & optional damp proof course (DPC). Intercept surface water at the foot of the land, line up against hard edges nearest the property with Hydrotrench & DPC. Join both drainage lines with 1-2 spurs cutting across the fall with Hydrotrench, suitable to severity and plot size.



TRENCHING & EQUIPMENT / OPTIONS INCLUDE: mini digger with micro trencher or taper tile bucket, ground trencher/geo-ripper, standard trenching machine or manual excavation for a small or access restricted patch, turf cutter (if applicable), wheelbarrows, ground protection mats for vehicles and/ or spoil holding, hazard barriers and trench covers if open trenches are unattended.



MARKING OUT / EQUIPMENT AND APPROACH: temporary non-toxic line marking paint, string line and pegs, open wheel measuring tape and measuring wheel. Measure and mark out the drainage layout to plan, making best use of the natural fall of the land where possible.



- ★ MANUFACTURED IN THE UK USING UP TO 90% OR GREATER RECYCLED POLYMERS
- ★ WORKS IN ANY SOIL TYPE (INCLUDING CLAY) & REJUVINATES FAILED EXISTING SYSTEMS
- ★ FASTER, MORE EFFICIENT, LESS LABOUR & MATERIALS THAN FRENCH DRAINS AND SLOT DRAINS



CHANNEL SIZE / APPROXIMATE DIMENSIONS:

Single panel trench width from 80mm, two panels side by side 130mm, three panels side by side 180mm, min depth 250mm.

Measurements provided do not include turfing / reinstatement, channel bedding and or pipe drainage in proximity.



CHANNEL CUTTING / PLANNING AND TECHNIQUE: check off site inspection assessment including safety hazards, where practical first install Hydrotrench outflow connection point to work back from, use turf cutter (if turfed) to remove and roll turf, excavate drainage channels maximising the fall presented and deploy measuring stick regularly to ensure required depths achieved. Use ground protection mats where possible.



CHANNEL MATERIALS / OPTIONAL ADDITIONS: once the channel is excavated, you can optionally use grit /gravel for bedding down the panels. Increase water interception with an impermeable damp proof course on the downslope side of modular drainage panels. Also use DPC at hardstanding edges such as patios (recommended). Do not fully surrounded or wrap product with geotextile.



FINISHING: remove any poor-quality excavated spoil from site and backfill with good quality, free flowing topsoil. Reinststate turf and or seed necessary areas. Aerate the ground regularly with a pitchfork.

DON'T JUST TAKE OUR WORD FOR IT LISTEN TO OUR CUSTOMERS...



We have a large garden, made up almost entirely of clay. Hydrotrench replaced the failed French drain and worked immediately. Still working great three years on!

Property Owner, North Yorkshire

Our garden has always caused issues due to poor existing drainage on clay and rubble. Hydrotrench was installed within 2 days - job done, problem solved.

Property Owner, Lothersdale



DRAINAGE ISSUES SOLVED WITH AMAZING RESULTS QUICKLY AND SUSTAINABLY



THE PROBLEM | Flooded Property Garden Patio

THE SOLUTION | Hydrotrench Drainage System



ROUDEN PIPE**TEK**

TO FIND OUT MORE ABOUT HYDROTRENCH AND TO ORDER PLEASE CONTACT US:

EMAIL: MAIL@ROUDEN.CO.UK

PEASE POTTAGE: 01403 275 276 | MAIDSTONE: 01795 843 866 | PETERSFIELD: 01730 777 350

NOTE: No liability will be accepted for incorrect use or installation of Hydrotrench. Novel use of Hydrotrench outside the scope of those published in official literature and guidance is not recommended. Only install Hydrotrench in accordance and compliance with all regulations and standards that are applicable to your site activities, building and construction work. Health and safety guidance and best practice should be adhered to at all times. Use the maximum safety precautions available at all times including while using any heavy machinery and or channel / ground cutting equipment. All rights reserved © Garden Drainage UK Ltd 2021