

ClaySolve Infiltration System

ClaySolve is a sustainable drainage system which incorporates the BluWater Systems Hydrorock IR40 Block. This enables effective onsite clay soil infiltration when installed as part of a bespoke design and build package

Based on a highly innovative, mineral wool product from global market leaders Rockwool, the ClaySolve infiltration system provides a unique, highly efficient buffering and infiltration solution for clay soil.

Working with nature is key to unlocking SuDS on clay soil

The ClaySolve system comprises boreholes which are drilled through the clay and filled with natural aquifer blocks. They provide natural conduits for surface water to rapidly percolate down and infiltrate into the permeable layer beneath. The bridging contact between the blocks and the permeable layer has the effect of creating a huge unitary natural aquifer, reaching from the surface to deep underground. A range of Bluwater Solutions Hydrorock BD or HD blocks can be installed in a trench directly above the boreholes to provide the system with any required additional buffering capacity.

Enables effective onsite SuDS water management

ClaySolve can be installed as part of a fully integrated onsite SuDS water management system. This system combines other BluWater Solutions Hydrorock SuDS systems for buffering, infiltration, attenuation and drainage. Retaining water on site improves critical soil condition and integrity, and prevents the environmentally damaging and costly practice of unnecessarily discharging, handling and treating water off site.



A green SuDS solution

BluWater Solutions Hydrorock Blocks are a natural aquifer product –soaking up water like a sponge, holding it like a reservoir and releasing it like a watering can. The blocks are ecologically and environmentally friendly, and totally recyclable.

Optimises site land and maximises construction

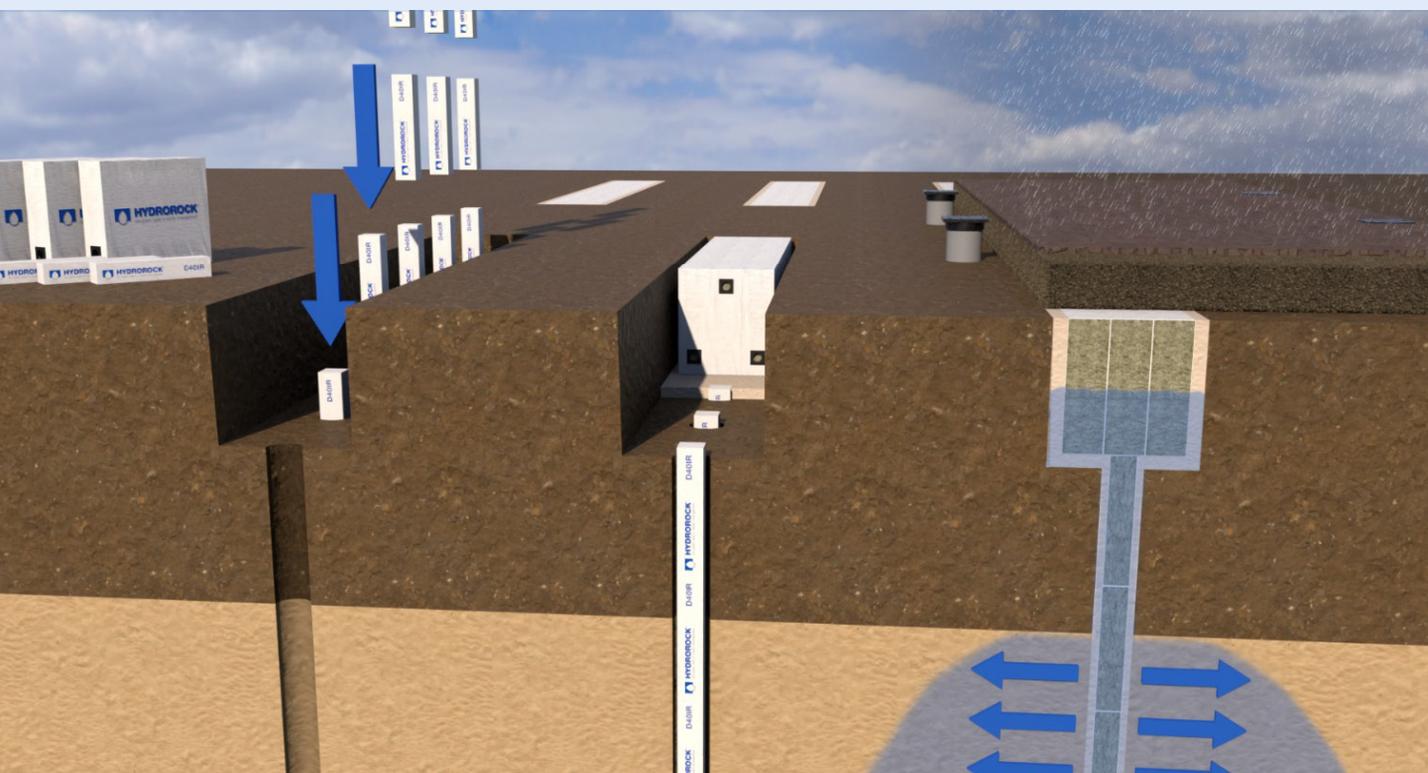
BluWater Solutions Hydrorock Blocks are solid and can be installed immediately adjacent to buildings, eliminating the large construction exclusion zones required by big centralised, crated water sumps. ClaySolve's high efficiency and the modular nature of the blocks enables small sized infiltration systems to be dispersed across the site. This allows developers to optimise land use and maximise onsite construction.

Highly efficient and cost-effective

Excavation for and installation of ClaySolve is small, simple and fast. The system offers lifelong, continued operation to design specification with minimal, non-invasive maintenance. ClaySolve Infiltration System provides numerous valuable benefits over all current alternatives, and the total installed cost is often significantly cheaper.

Technical information – BluWater Solutions Hydrorock ClaySolve System

- Configuration of a ClaySolve System depends on key project site variables: water volume, soil type/ permeability, thickness of clay soil to permeable layer, site area/ layout.
- The test drilling is recommended to ascertain depth, thickness and of the permeable layer.
- Minimum trench excavation requirement: 1 m W x 1.3 m D x 5 m L.
- A 325 mm diameter borehole should be drilled in the middle of the trench through the clay layer and at least one 1m into the permeable layer.
- The borehole should be filled with BluWater Solutions Hydrorock IR40 Blocks (cm 100 L x 20 W x 20 H) stacked tightly and vertically end-to-end.
- Total number of boreholes required will depend on system capacity and the infiltration rate of permeable substrate.
- The bottom block should touch the bottom of the borehole and the top block should protrude 50 mm above the top of the hole at the bottom of the trench.
- The bottom of the trench should be filled with a levelled sand layer 100 mm thick.
- BD440 Blocks (cm 120 L x 100 H x 40 W) should be placed into the trench on the sand stacked tightly together in pairs and abutted end-to-end.
- Other blocks from the Hydrorock range with varying sizes and densities specified according to system capacity requirements and above surface weight loading.
- Larger systems may require air venting capability to enable required rapid water inflow into the system.
- Systems can be designed with a looped water inflow system, for more rapid inflow and cleansing if the inlet filters are compromised.
- All systems should be fitted with a filtered inlet. There are three sizes depending on volumes.
- The system can be placed around existing infrastructure, such as pipes and cables.
- The system can be dispersed in many shapes and sizes, optimising positioning on the site.
- BluWater Solutions Hydrorock Blocks are prewrapped in geotextile membrane so installation is very simple and quick with minimal disruption, and excavation need only be as large as the blocks.
- No specialist installation engineering or equipment is required with simple snap-together fittings. No special skills or tools are needed.



BluWater
Solutions

BluWater Solutions is a BioScapes brand
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