SuDS Permeable Paving

Attenuation Car Park, Sudspave, Devour, Holmfirth, UK

CASE STUDY

Project Information

Client	Devour Restaurant
Contractor	Radcliffe Construction
Product	Sudspave 40 Truckcell 80
Quantity	1,800m^2 , 380m^2 respectively
Benefits	• Pavers to suit cars and delivery vehicles • Light and easy to install • Coloured to match selected stone • Attractive part of SuDS subbase

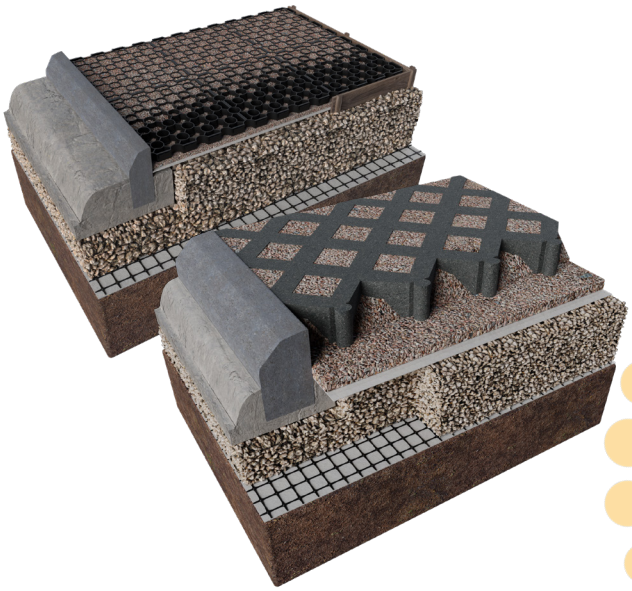
Project Description

"Nestled in the picturesque and historic Holme Valley, a stone's throw away from the cobbled streets of Holmfirth. Flanked between ancient woodland and the gentle ebb and flow of the river Holme.... lies DEVOUR." ..the opening description for the redevelopment of a historic abandoned mill in the Thongsbridge area of Holmfirth as a restaurant and cookery school. The restaurant expects a large number of customers from the area and further afield. A large car park was planned with landscaping along the river blending into the beautiful surroundings.

The Challenge

Part of the planning consent for the project was to provide a SuDS compliant attenuation and a regulated flow outlet into the River Holme from the site. The client also required the car park to look as natural looking as possible. Initially a series of buried SuDS tanks were specified to take the rainfall runoff from the site which would have required extra excavation and backfill. The water table remained high even at some distance from the river. In addition a root barrier geomembrane was required to prevent growth up through the car park. This meant no natural infiltration of rainwater was possible. Special ground stabilisation proposed by ABG was used to prepare the subbase (See ABG Stabilisation Devour Mill CASE STUDY).

The site has a narrow entrance which opens out to the car park and requires delivery lorries to enter and turn around safely before exciting. This would potentially put pressure on the durability of the surface.



ABG Sudspave 40 & ABG Truckcell 80

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The Solution

ABG offered a re-engineered solution showing that a porous Type 3 subbase attenuation stone over the whole car park would provide the storage volume needed to handle the predicted stormwater, so that discharge could be restricted to consent levels. This removed the need for expensive buried tanks with its associated extra excavation and need to remove contaminated soil. The majority of the running surface for cars was covered with **Sudspave** interlocking pavers, coloured especially to match the selected infill gravel to create a natural look. The delivery goods vehicle turning area used the heavy duty **Truckcell** paver filled with the same gravel. Once the Type 3 was levelled both pavers were bedded on a regulating layer of gravel and filled.

The ABG Service

ABG offered re-engineering design support and advice. Including technical calculations and site visits. Bespoke coloured pavers were provided.

Sudspave units were pre-formed into panels for rapid installation and easily interlocked before surface gravel was brushed into the surface. Truckcell provides a robust, permeable and lightweight surface, easily installed via the pavers' locating lugs.

Beige coloured Sudspave filled with selected gravel with car park bay markers all blending into the landscape

Entrance road narrow and curved where delivery lorries drive through onto the Truckcell turning area

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