

SuDS Permeable Paving

Access Roads, Sudspave, Derby University, UK



CASE STUDY



Project Description

Following a design competition held in November 2003, Architects Design Partnership (ADP) was appointed to design a new performing arts, design and technology building for the University of Derby. Located in a semirural position at the edge of the city, the new campus has been designed to group together a number of departments into a single building with state-of-the-art facilities. It was hoped that the scheme would build on Derby's local heritage as a centre of design and innovation – being home to both Rolls Royce and Bombardier – whilst also equipping a future workforce with the best possible skills for the creative industries.

The Challenge

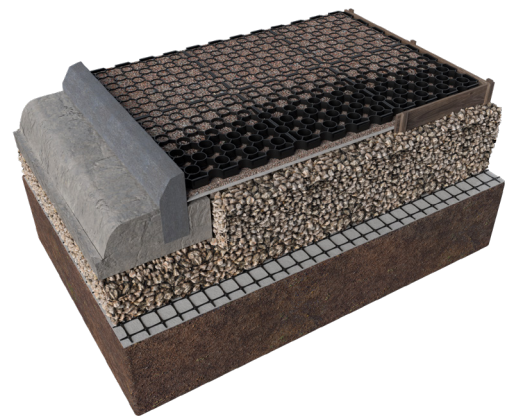
The new building occupied a site that sits on the border between urban form and landscape. On one side was densely packed Victorian terraced housing whilst on the other was bounded by a stream and natural landscape. Sustainability and low-energy usage were integrated into the design from the outset, resulting in an architecturally innovative building that changed a previously contaminated brownfield site into an ecologically sustainable landmark building. The external landscaping was an important aspect of the sustainable design of the development, and incorporated many SuDS techniques including reed beds, lakes and a porous road pavement solution.

The Solution

ABG Sudspave 40 porous paving is a system of interlocking cellular paving units designed for the stabilisation of trafficked grass or gravel surfaces. Suitable applications include car parks, emergency and maintenance vehicle access roads, cycle paths and pedestrian areas.

Project Information

Client	University of Derby
Contractor	Vinci UK
Product	Sudspave 40, Terrex NW8
Quantity	1,000m ²
Benefits	<ul style="list-style-type: none">• Rapid installation – supplied in preassembled panels• Easy handling and cutting to shape• High percentage surface opening to receive coloured gravel to suit required finish• Cost effective over concrete systems



ABG Sudspave 40 permeable paver typical build-up

ABG LTD

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ABG Sudspave offers a cost-effective, robust and aesthetically pleasing solution for many applications where gravel retention or grass reinforcement is required and where source-control of surface water forms part of a Sustainable Drainage System (SuDS) design.

In this application Sudspave was installed over a free draining DOT Type 3 sub-base designed to allow surface water to infiltrate through to the underlying soils. **ABG Terrex NW8** filtration and separation geotextile was used to prevent the leaching of fines which could potentially compromise and clog-up the sub-base stone. Finally, a gravel bedding layer was installed prior to installation of the **Sudspave** panels. The **Sudspave** panels were then infilled with a clean 4-14mm angular gravel to form a free draining surface offering a source control element as part of the SuDS scheme requirements for the site.

The ABG Service

ABG gave technical advice considering surface loading and subsoil conditions to ensure the selection of the most cost effective and workable solution.



The sublayers are built up from a prepared ground level overlain with a **ABG Terrex** geotextile then open **Type 3** structural drainage subbase. Then an additional separator **Terrex** before placing a sand bedding layer to receive the **ABG Sudspave 40** paving units. The units are pre-assembled together in sets of four to speed installation.



Sudspave clips together to form one interlocking system



A porous and aesthetically pleasing finish

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