Case Study 05
Bristol Airport Car Park

Location
Bristol International Airport car park
Bristol

SuDS Used
Permeable paving and swales

How it works
The new valet car parking provides 10,000 square metres of additional parking with space for up to 1,000 vehicles. All surfaces are covered in permeable paving using the Netpave 50 system discharging into swales.

Specific details
The surface is Netpave 50 flexible surface filled with aggregate and bedded on 20mm of the same aggregate. This sits on a geo-textile layer which separates it from a very porous sub-layer consisting of 5-45mm stone. The bottom layer is another geotextile layer and the whole system is contained in an impermeable membrane. Surface water runoff is directed to perforated pipes bedded into the sub base layer; these connect to a silt trap, and then to swales for final treatment and dispersal. Netpave 50
consists of 500mm square clip-together pavers which can be filled with gravel or a growing medium and then seeded.

**Design and Construction**
SuDS was required because the site is situated on top of a local aquifer. The permeable paving filters out the pollutants within the runoff.

**Benefits and Achievements**
The Netpave 50 system was faster to install than a traditional car park and cost savings were made as there was no need for petrol interceptors.

**Challenges**
The system was considered less suited for public areas due to the potential for trip hazards. Other systems could have been used in public areas.

**Maintenance**
9 years after Phase 1 was completed the system is working efficiently with little to no maintenance required.

**Team and Details**
**Design and construction** – Bristol Engineering Consultancy (Bristol City Council)
**Completion** Phase 1 completed April 2005, Phase 2 begun January 2008