built on relationships

CHELTENHAM CAR PARK

PROJECT:	Cheltenham Architects Car Park
CLIENT:	Private Development
PRODUCT:	Alpha Flow 60mm Charcoal
SIZE:	NA

The small car park area is located adjacent to a three-storey Victorian semi-detached building, with additional small areas of garden and pedestrian access to the front and side.

The narrow plot has a long road frontage with direct street access (over a previously constructed crossover) to the car park.

The site architect was keen to try a Sustainable Drainage System (SuDS) on the site which would also address the complex drainage issues caused by the existing car park laying above adjoining structures for most of its area.

Taking this approach also allowed the designer to take into account the apparent infiltration capabilities of the existing area and lack of space to accommodate other SuDS features.

It was therefore decided to explore the design of an infiltrating (System A) permeable pavement but with protection to deal with the constraints discussed above.

1. Infiltration to be encouraged towards the centre of the paved area with slight falls in the excavated subgrade away from the perimeter.
2. Protection of perimeter area items such as lower floor levels and wall foundations with a 1m wide impermeable liner.
3. An overflow mechanism for exceedance, using a 50mm perforated pipe wrapped in geotextile, laid at the top of sub-base to transfer excess water from the pavement.

This is connected into an existing trapped gulley discharging into a manhole on the combined drain.