



Location

Knowle West Media Centre, Leinster House, Leinster Avenue, Bristol, Bs4 1NL

SuDs Used

In 2008 the Knowle West Media Centre installed permeable paving in the car park and a rainwater harvesting system as part of a new development.

How it works

Formpave permeable paving was used for the car parking areas and pedestrian walkways. Rain which falls onto these areas and an adjacent impermeable road-strip infiltrates the ground. Roof run off is collected by a rainwater harvesting system and used to flush toilets. The geology of the area is not adequate for conventional soakaways. Any overflow drains directly into the mains drainage system.

Specific details

The permeable paving is set in a sub-base of gravel with 30% voids which store water. There are two geo-textile membranes which act as both filters and cleansers; the bacteria which live on these membranes can break down oil which may be carried in the paving from the car park. The system is designed to deal effectively with a 1 in 10 year storm without causing any surface ponding. However the design will cope with a 1 in 100 year storm adequately. The permeable paving needs to be swept once a year.

Design and Construction

Local young people were engaged from the start in the design process. They highlighted the need for an environmentally sustainable building and landscape.

Benefits and Achievements

The centre promotes sustainable practices so SuDS fits in with the building's ethos.



Challenges

There were differing opinions from companies bought in for general maintenance issues. A lack of consistency with expertise led to some confusion regarding best practice.

The pump which circulates the rain water around the building is no longer in use. The media centre has had to prioritise its limited budget elsewhere at present. The facilities manager was keen to express that as soon as the funds are available the pump will be repaired.

Lesson learnt

Specialist SuDS expertise would have helped solve the maintenance issues. However the current system is still effectively managing run-off.

Team and Details

Architects – White Design

Structural engineers / SuDS designers –
Integral Engineering Design