

Location

The Dings, Bristol

SuDS Used

Permeable paving and tree pits.

How it works

The Dings is a residential area north of Temple Meads. Designed as a Home Zone where pedestrians and vehicles share space on equal terms with a one-level permeable paving.

Specific details

The permeable paving (Aquaflo by Formpave) allows runoff into a stone sub-base. The sub-base treats the runoff by filtration and microbial action before being slowly released in a controlled manner.

Design and Construction

The existing combined sewer systems was already at capacity. Permeable paving attenuated runoff without costly underground storage tanks. A key design objective was to create a streetscape with minimal use of bollards and other obstacles that could impair pedestrian movement.





Benefits and Achievements

The drainage in the area has improved and there is no longer an occurrence of ponding after rain. The use of permeable paving was a low cost solution compared to underground attenuation. The permeable paving accommodated the Home Zone flush shared surface and avoided the potential barrier to those with impaired mobility of traditional drainage and kerbs.

Challenges

During the construction, one section had to be lifted and relaid; water pooling was occurring because muddy construction vehicles had been travelling over the surface and caused it to block.

Lesson learned

Residents have been advised against cleaning soiled vehicles in close proximity to the permeable paving to avoid localised blockages.

Maintenance

The permeable paving forms part of the adopted highway. BCC maintain this by brushing with a road-sweeper four times a year. The cost of maintenance is low; 1-2 days labour a year.



Team and Details

Structural engineers/SuDS designers –
Jason Stephens, BCC

Partners – Sustrans and BCC Urban Design team

Completion 2005