Permavoid System

Technical Bulletin

Issue No: 8 July 2016 P1

Permavoid System: **Residential Developments**

In residential projects, the need to balance the provision of land for housing and public amenities, whilst protecting biodiversity and 'making space for water', provides an ever-increasing challenge.

Incorporated in conjunction with soft SuDS techniques, Permavoid can help to overcome this challenge by 'making space for water' and providing retention, infiltration, attenuation and treatment at source.

The result is a sustainable development which enhances the ecological benefits of the site to its residents, in line with the DEFRA National Standards for delivering sustainable drainage systems.

Key benefits

- Create small source control sub-catchments
- Enables design with the treatment train concept
- Shallow, easy to maintain systems
- Reduced pollution loading
- Aesthetically pleasing spaces
- Easy to retrofit
- Improved health and safety benefits

Strong Interlocking Raft

Beneath porous & non-porous surfaces

Source Control

Treatment

Retention

Attenuation

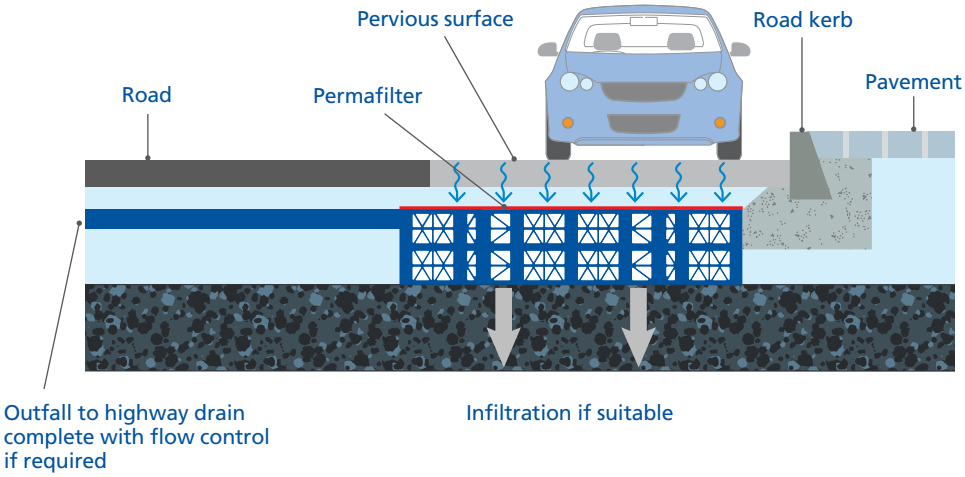
Infiltration

Polypipe

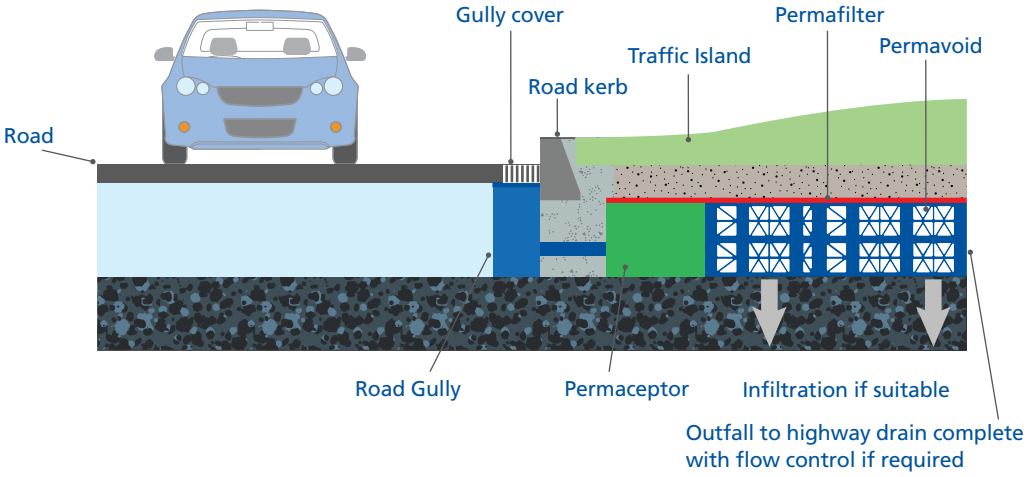
Permavoid System Technical Bulletin

Issue No: 8 July 2016 P2

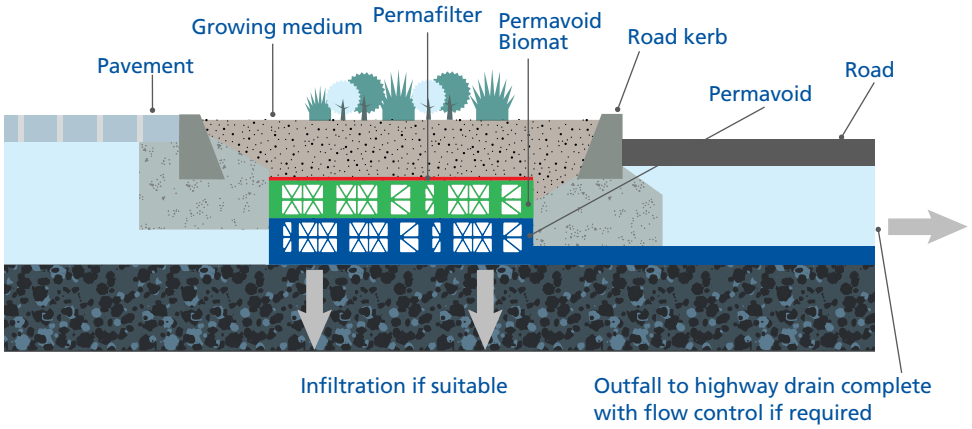
1 Car Parking



2 Permeable Roads and Traffic Islands



3 Bioretention Zone



1. Car Parking

Permavoid used as a sub-base replacement solution below permeable paving prevents rainwater running straight off driveways, providing source control, treatment, retention, attenuation or infiltration.

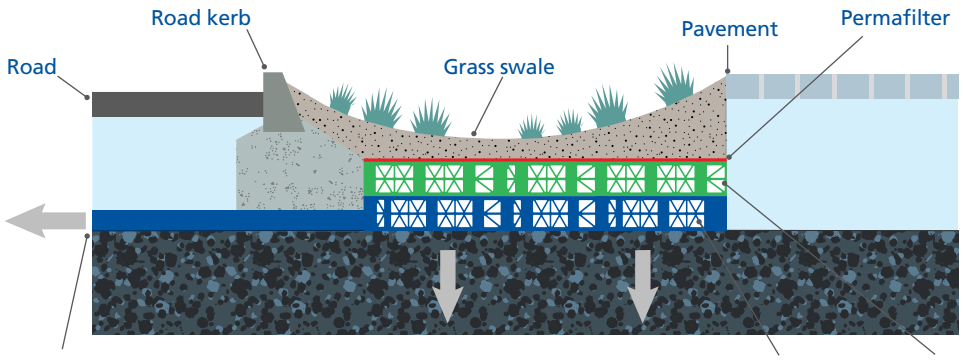
2. Permeable Roads and Traffic Islands

Permavoid can be used as a sub-base replacement solution below permeable roads and turning islands in order to prevent stormwater run-off, and provide source control, treatment, retention, attenuation or infiltration.

3. Bioretention Zones

Stormwater run-off from highway and pavement areas can be collected and treated using bioretention areas, complete with Permavoid treatment solutions. This protects biodiversity and amenity whilst providing effective stormwater management at source.

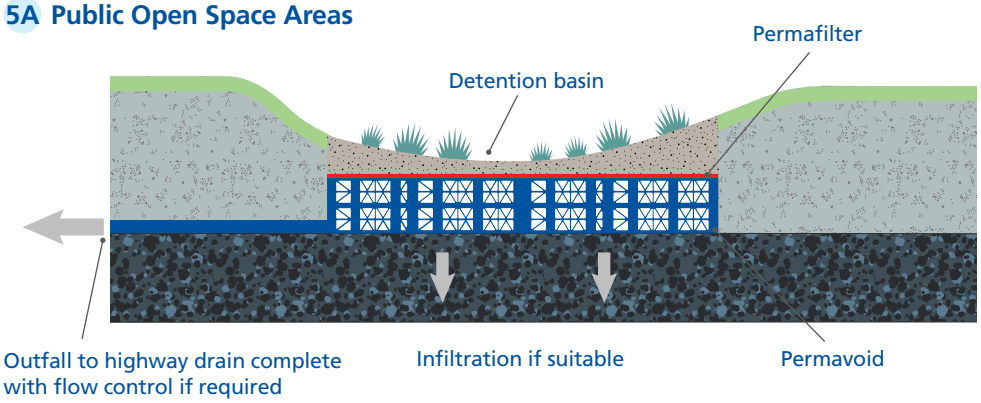
4 Grass Swale



4. Grass Swales

The Highways agency have used grass swales alongside roads and highways for many years due to their cost-effective nature. Swales are designed to be shallow for safety reasons and can be underdrained with Permavoid to provide maximum storage capacity with additional treatment benefits.

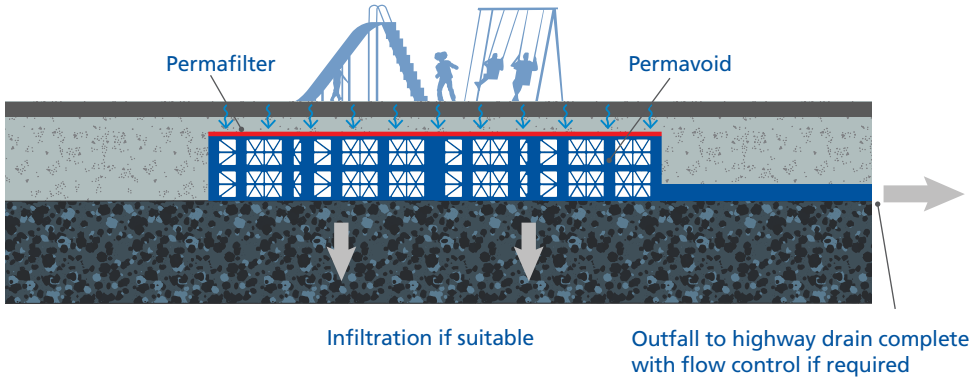
5A Public Open Space Areas



5a. Public Open Space Areas

Stormwater run-off from residential sites can be discharged into the Permavoid system below a detention basin to provide safe attenuation or infiltration. Only during heavy rainfall periods will water rise into the landscaped basin.

5B Public Open Space Areas



5b. Public Open Space Areas

Permavoid can be used as a sub-base replacement system below ground, freeing up space above to be utilised by the community for amenity, and landscaped to improve biodiversity.

TECHNICAL WORKSHOP

Contact Us

to find out about our Technical Workshop

Look out for our Permavoid Technical Manual, available to download from our website

Polypipe Civils,
Charnwood Business Park, Loughborough, Leicestershire LE11 1LE
Tel: +44 (0)1509 615100 Fax: +44 (0)1509 610215 Email: civils@polypipe.com
www.polypipe.com/wms

Polypipe