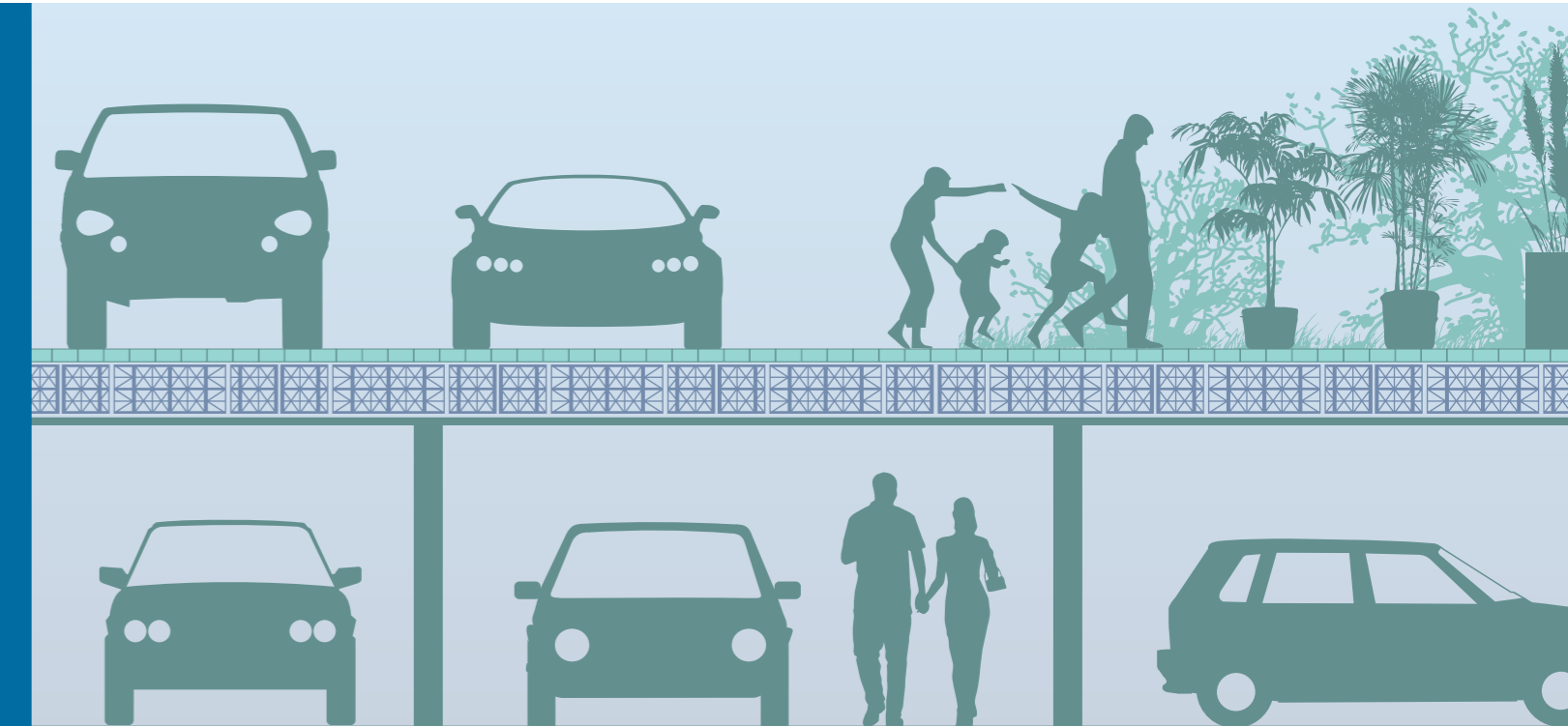


Permavoid Podium Deck Water Management System from Polypipe

Permavoid Podium Deck System from Polypipe



Because 95% of it is void space, Permavoid is more cost effective and easier to transport than an equivalent volume of aggregate

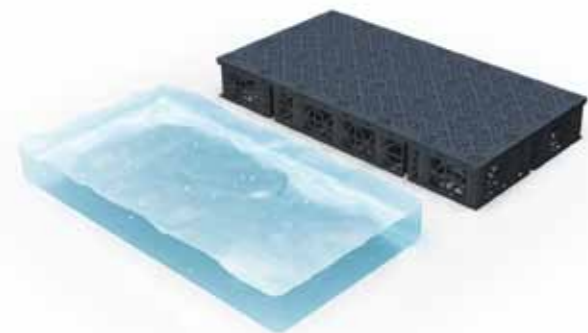
Ease of installation

The system is straightforward to install and can help deliver lower labour costs and reduced completion timescales when compared with traditional podium deck drainage methods through the elimination of the following items:

- Provision of falls to the deck surface
- Pipe outlets through the deck including waterproofing
- Suspended pipework beneath the deck

Performance

The Permavoid system consists of interlocking modular units that are installed as a structural raft and will support loads across the largest deck areas. The design of the system makes it less susceptible to compaction, deformation and leaks than aggregate sub-base systems. As a result, it offers a longer overall lifespan than traditional deck construction methods, with fewer maintenance issues.



95% void ratio



30% void ratio

Polypipe Civils
Charnwood Business Park
North Road
Loughborough
Leicestershire LE11 1LE

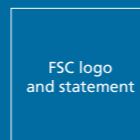
Tel: 01509 615100

Fax: 01509 610215

Email: enquiries@polypipecivils.com

www.polypipewms.co.uk

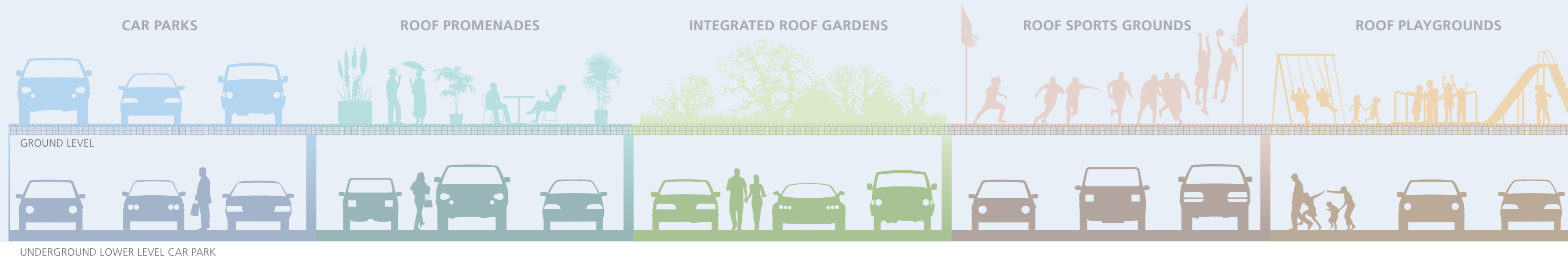
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All inks used on this brochure are vegetable based.



The sustainable and economical alternative
to traditional podium deck drainage techniques

Permavoid Podium Deck System

The alternative sub-base that creates more space, more flexibility and more opportunities.

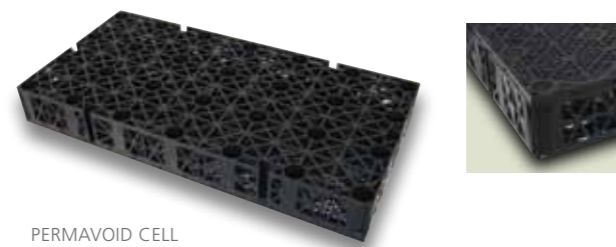


SUITABLE FOR USE WITH ALL TYPES OF PERMEABLE SURFACES

The Permavoid Podium Deck solution is a lightweight modular water management system providing drainage and water harvesting within a slender, watertight deck construction.

The benefits of the Permavoid Podium Deck System

- Sustainable, cost effective alternative to traditional systems
- Provides a source control SUDS solution
- Lightweight construction
- Can eliminate the need for outlets through the deck, reducing leak potential
- Eliminates the need to construct the deck slab to falls
- Acts as a combined drainage and attenuation system
- Rainwater harvesting – water stored at high level within the deck can be distributed by gravity and re-used
- Eliminates pipework to the underside of the deck
- Load bearing system that is strong enough to carry traffic loads
- Optimises deck surface area available for uses such as car parking, sports facilities and green roofing
- Extends the life span of the waterproofing membrane as it protects against the effects of UV light and insulates against extreme variations in surface temperature and associated thermal movements
- Provides for a greater range of surface finishes
- The underside of Permavoid is designed specifically to be compatible with roof membrane systems and will assist in the protection of the waterproofing layers
- Able to accommodate planting schemes directly into the deck providing integrated roof gardens



PERMAVOID CELL

Addressing the technical challenges

As podium decks increase in size and use, the requirement of achieving efficient water management becomes more difficult. The Permavoid podium deck system addresses a number of the technical challenges presented by the need for stormwater drainage on decks and roofs that are beyond the capabilities of traditional gravel and geocomposite layers. The water storage capacity afforded by the system means that there is no need for drainage outlets to be taken through the deck, water can be taken to the edge of the slab where rainwater down pipe connections are easy to make. In addition the Permavoid layer is designed to have sufficient hydraulic capacity to facilitate lateral drainage over very large areas without the need for constructed falls within the deck. The units are strong enough to allow emergency vehicle access without the need for deep granular layers, thus reducing the weight of the deck construction.

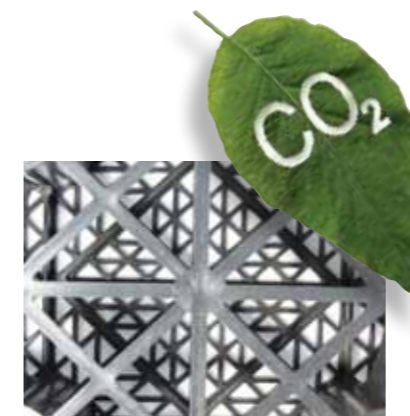
A more sustainable option

The Permavoid podium deck water management system provides an ideal first stage source control sustainable drainage component that can be easily integrated into the overall SUDS design with other Polypipe filtration, attenuation and rainwater re-use systems. This can significantly enhance the sustainability of a project by:

- Allowing harvested rainwater to be used for the irrigation of green areas or toilet flushing without the need for pumping
- Reducing dependence on air conditioning by taking advantage of the cooling properties of attenuated water
- Reducing run-off and flood risk
- Effectively treating pollutants from contaminated water run-off through the use of filtration, including Permafilter Geotextile and Permavoid Biomat

Permavoid offers other substantial environmental advantages too:

- It is made from 100% recycled material, is 100% recyclable and can be re-used
- It can reduce your transport carbon footprint dramatically: typically, one delivery of Permavoid is equivalent to 21 deliveries of open graded aggregate in terms of water storage capacity



Polypipe customer service and support

Our specialist design team will help with the design of your Permavoid Podium Deck System from inception to completion including the provision of hydraulic and structural calculations and development of bespoke engineering drawings.

You can call for site visits and project co-ordination and take advantage of our technical support helpline for a rapid response to all your enquiries on **01509 615100**

Proven track record

Permavoid has over a decade of continuous validation testing including hydraulic, structural and full-scale pavement trials and installations throughout the UK and Europe which have demonstrated the systems:

- Suitability for light and heavily trafficked areas
- Superior performance in comparison with traditional sub-base materials
- Compatibility with various waterproofing layers
- Ease of maintenance
- Whole life sustainability and economy



POLYPIPE WMS TECHNICAL DEPARTMENT

HYDRAULIC, STRUCTURAL AND FULL PAVEMENT TRIALS