

Construction

While easy to construct, HydroSTON pavements need to be free draining and structurally stable. This requires creation of voids in the pavement substructure and compaction of materials having minimal 'fines'.

Maintenance

Regular removal of surface debris will maintain the performance of HydroSTON pavements. However, when necessary, HydroSTON can be cleaned in situ with readily available water/suction equipment.

Research

HydroSTON pavers manufactured in Australia benefit from extensive research conducted over many years in Germany. Research focuses on hydraulic behaviour, pollutant retention, design, construction and maintenance. HydroCon participates as an industry partner in permeable pavement research programs undertaken at the University of South Australia.

Colours

Charcoal



Natural

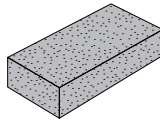


Other concrete colours can be manufactured during scheduled production runs.

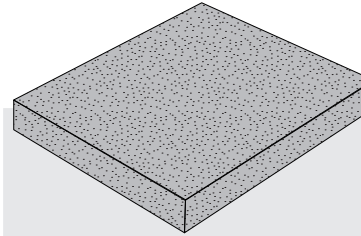
Applications

HydroSTON Pedestrian

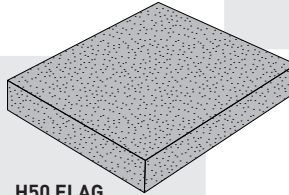
Suitable for footpaths, walkways, plazas, courtyards and tree surrounds



H50 BLOCK
50 x 200 x 100mm



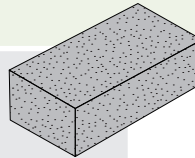
H50 FLAG XL
50 x 400 x 400mm



H50 FLAG
50 x 300 x 300mm

HydroSTON Traffic

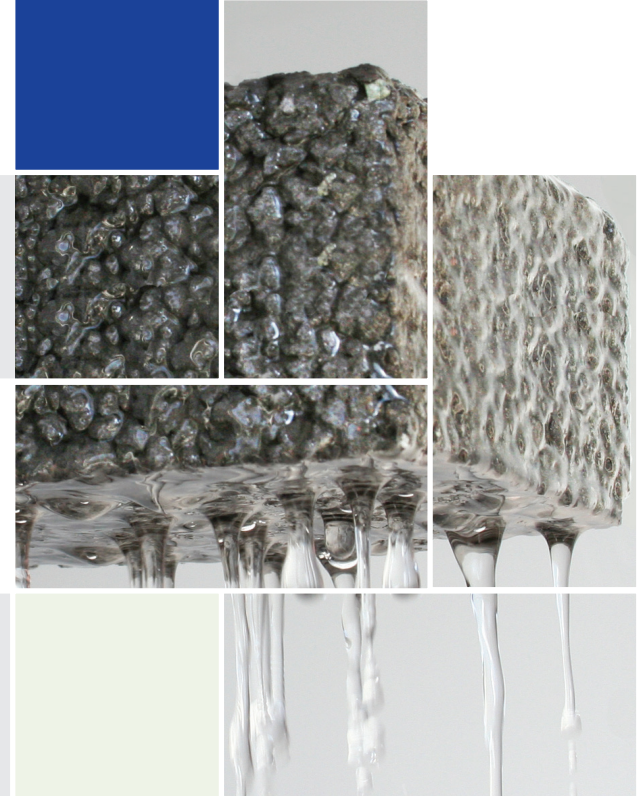
Suitable for carparks, driveways and minor roads



H80 CLASSIC
80 x 206 x 136mm

HydroSTON

from HydroCon



Permeable
Concrete
Pavers



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Managing water in the urban environment

Permeable pavements

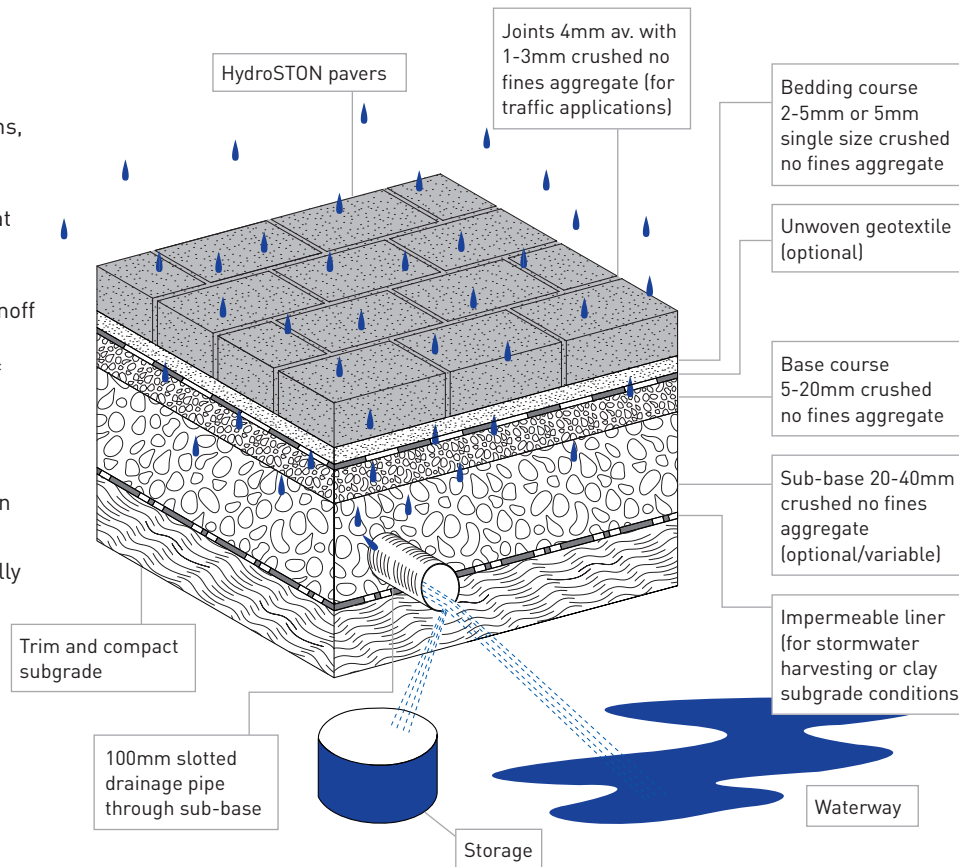
The use of concrete, asphalt and other non-porous materials for roads, car parks, footpaths, driveways and many public spaces is having profound effects on the water cycle within the urban environment. It has been calculated that up to 95% of rain falling on cities and towns is rapidly directed via stormwater drainage systems to local waterways. Surface water runoff places heavy pressure on existing drainage systems and increases the volume and rate of flow to waterways.

Permeable pavements can help restore the natural water cycle, reduce the impact of development on waterways and improve urban water security.

Permeable pavements offer an environmentally sustainable, cost effective and beneficial long term approach to site and urban drainage.

HydroSTON® permeable concrete pavers

- Are fully permeable, durable and non-slip
- Improve water quality by filtering stormwater runoff at source
- Facilitate on-site water retention and harvesting of stormwater
- Reduce local flooding and surface ponding
- Take pressure off existing stormwater drainage systems
- Assist in replenishing groundwater and aquifers
- Contribute to urban water security
- Provide a viable and cost effective alternative to existing storm drainage systems
- Satisfy local government permeable area property ratios
- Increase water supply to trees and landscaped areas
- Allow root aeration
- Improve urban micro-climates



Permeability

HydroSTON pavers are categorised as “free draining” under AS 4456.16 with average rates under laboratory testing of at least 270mm per minute or 4.5 l/sec/m². HydroSTON pavements have very high permeability rates due to 100% permeable surface area. Overall performance of HydroSTON pavements depends not only on infiltration capacity of pavers but also on pavement substructure (and subgrade in the case of infiltration applications).

Water quality

HydroSTON assists in improving water quality by filtering out debris and pollutant laden particles. Pollutants such as heavy metals, hydrocarbons and nutrients (phosphorous) attached to particles are retained in the surface layer of HydroSTON pavements, where they can be flushed out by periodic cleaning.

Harvesting and storage

Installation of slotted collection pipes within a HydroSTON pavement allows water to be channelled to existing stormwater systems, waterways or to storage tanks for potential reuse. Placement of a liner around the HydroSTON pavement prevents ground infiltration and overcomes problems associated with clay soils.

Infiltration

HydroSTON allows rain and stormwater to permeate into the ground as occurs naturally in rural and undeveloped environments. Infiltration ‘at source’ reduces stormwater runoff, improves water quality, supplements groundwater and lowers temperature in densely settled urban areas.

