SUD PAVE

South Africa's first locally manufactured permeable paving grid!

Permeable paving grids have been tried and tested in Europe, USA and Australia for approximately 15 years. This technology is now available and locally manufactured in South Africa.

MADE IN SOUTH AFRICA

SUD PAVE

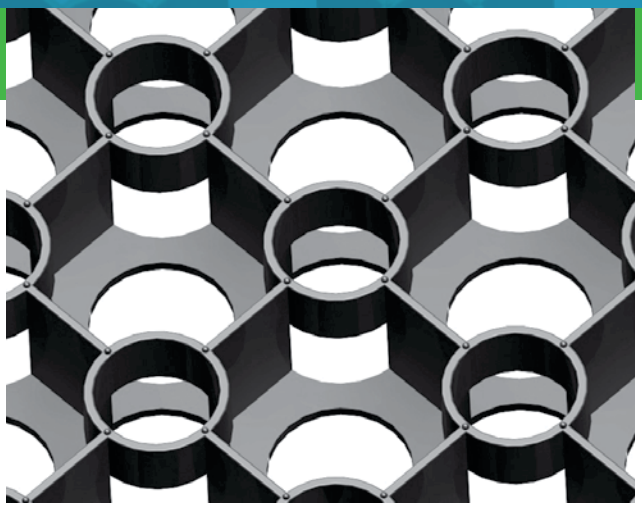
a collaboration with:

BA
BERGESEN AGENCIES

diemaster industries

PRODUCT DEVELOPMENT | TOOL & DIE CONSTRUCTION | TOOL & DIE MAINTENANCE
PLASTIC INJECTION MOULDING | INSERT MOULDING | VERTICAL MOULDING
ASSEMBLY | ULTRASONIC WELDING | PACKAGING

Function



Sudpave™ plastic grid pavers are used to control the run-off of rain water to limit the impact on over loaded storm water infrastructure. **Sudpave™** is an open cell structure, which is either gravel filled, for frequent intensive use, or grass planted for occasional consecutive use. The open structure allows rain water to permeate into the ground at its source. **Sudpave ™** is now manufactured in South Africa to meet the increasing demand for paving products that satisfy the requirements of a Sustainable Urban Drainage System (SUDS).

Locally sourced recycled material and resources are used to produce an economical Plastic Permeable Paver for the control of storm water run-off.

INTEGRAL GROUND SPIKE TO RESIST LATERAL MOVEMENT

OPEN CELL STRUCTURE FOR OPTIMUM GRASS GROWTH

POSITIVE SNAP-FIT CONNECTION FOR BETTER STABILITY

HIGH LOAD BEARING (PANEL SHOWN UNFILLED)

System Features

- Natural grass or gravel surface options
- High load-bearing capacity when gravel filled
- 95% open surface structure (SUDS compliant)
- Source-control compliant.
- Can accommodate inclines of 1:8 / 12% / 7° and localised gradient changes.
- No pinning required except on excessive gradients
- Accelerated installation with 1 m x 1 m panels
- Four pre-connected pavers supplied as standard
- Environmentally friendly and aesthetically pleasing
- Suitability for hot and cold climates due to expansion or contraction capability
- Less wastage as pavers can be incrementally off-set connected to accommodate curves and obstructions
- Non-toxic and chemically inert to the chemicals naturally found in soils.

Benefits

- Replenish ground water naturally
- Filtration of motor oils and other pollutants normally encountered in parking areas
- Reduces heat island effect
- Aesthetic flexibility
- Reduces the incidence of flooding.
- Low maintenance
- Can be used in conjunction with a water recycling system as a catchment source.

Applications

- Car parks
- Driveways
- Emergency access routes
- Aircraft taxiways & helipads
- Wheelchair and disabled access
- Pedestrian walkways
- Golf buggy paths
- SUDS source control
- Equestrian arenas
- Livestock milking parlours.

Installation

NOTE: Design of the sub-base is dependent on the loads to be carried and prevailing ground conditions. The guidelines below are an indication only.

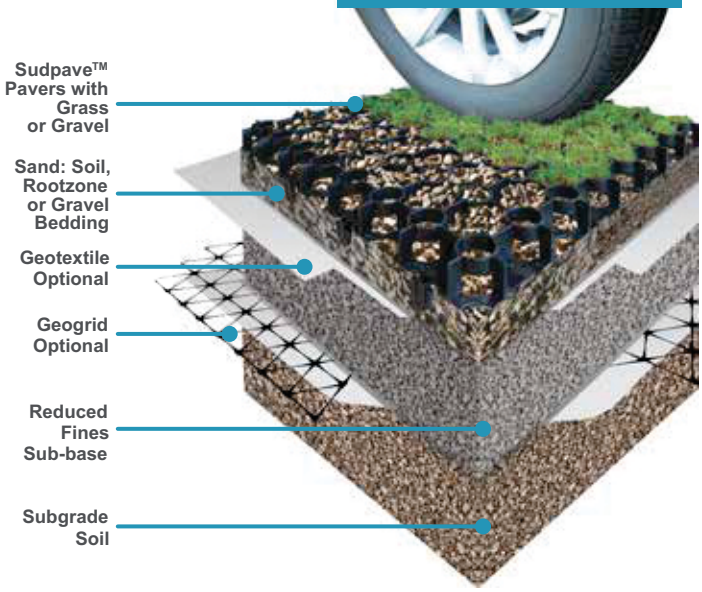
Sub-Base for Stone Retention

1. Subject to load and ground conditions, the sub-base would typically comprise 100 mm to 300 mm of well compacted G5 type material.
2. Then place a 100 mm layer of reduced fines 3 mm to 10 mm dependent on drainage requirements and on site ground conditions. Compact to an even finish.
3. A 40 mm layer of compacted bedding sand / river sand is laid onto a geotextile separation layer.
4. **Sudpave™** is laid onto the bedding layer, and then gravel filled.
5. The gravel filling should be 6 – 10 mm angular stone.
6. The selection of gravel colour to suit specific aesthetic requirements.

Sub-Base for Grass

1. Subject to load and ground conditions, the sub-base would typically comprise 100 mm to 300 mm of well compacted G5 type material.
2. Then place a 100 mm layer of reduced fines 3 mm to 10 mm dependent on drainage requirements and on site ground conditions. Compact to an even finish.
3. A 70 mm – 100 mm layer of compacted growing medium which is a mixture of river sand and top-soil is laid onto a geotextile separation layer.
4. **Sudpave™** is then laid and compacted with a vibrating plate.
5. **Sudpave™** is then loose filled with clean friable top soil and seeded. It is important not to overfill the paver or to compact the soil within it.

GRASS OR GRAVEL



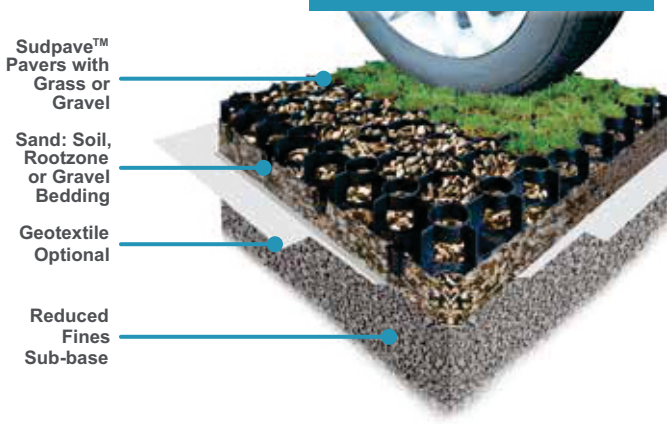
All information is provided as a guide only.

Domestic Lay

Converting existing grassed areas into access roads, car parks, driveways and the like, DOMESTIC LAY construction requires little or no excavation.

1. The site is prepared by removal of all alien vegetation.
2. It is recommended that the site is levelled and lightly compacted.
3. A geogrid is then laid, for increased stability, especially in very soft ground conditions.
4. Followed by a coarse grit sand and soil mix.
5. **Sudpave™** pavers are then laid, secured, soil-filled and seeded.
6. The edges are feathered down to the surrounding grass, if desired or necessary to retain existing ground levels.

DOMESTIC LAY PROFILE



It is recommended that a nonwoven geotextile be used to separate various layers where required.

Kerbing

Sudpave™ would require kerbing in order to prevent traffic riding over the edge and to retain the paving.

For light domestic use, kerbing could be a 300 mm wide, 12 -16 mm laminated shutter board. For high traffic areas brick or concrete kerbing is recommended.

Sudpave™ Paving Grids

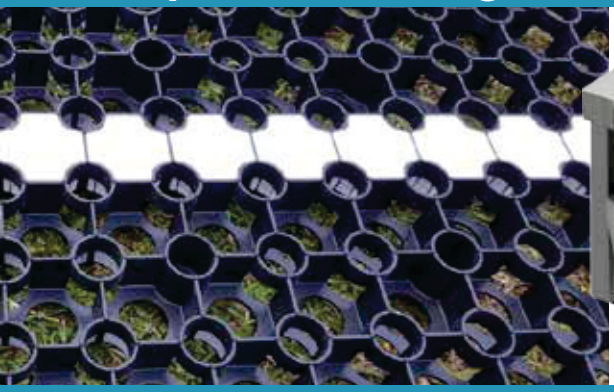
Urban growth, with increased building development, has created more roof area, the expansion of hard surface for paved roadways, parking areas, promenades and walkways. As a result, the catchment area of rain water has expanded to such an extent that the conventional storm water infrastructure can no longer cope, often leading to flooding, even under normal rainfall conditions.

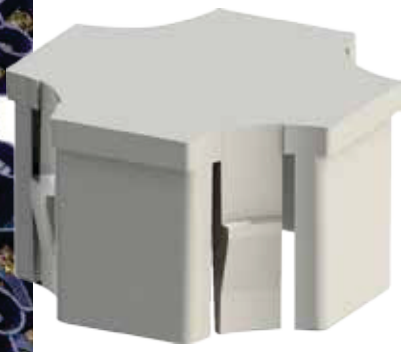
In extreme rainfall conditions, the resultant run-off can become life-threatening. Consequently, municipalities are now calling for alternative methods of storm water control. This lead to the development of **Sudpave ™**, a unique permeable paving approach to storm water control that complies with the requirements of Sustainable Urban Drainage Systems. (SUDS).

Sudpave™ allows the rain to soak through the permeable paved area, at the point of impact, thereby minimizing the problem of run-off. Water infiltrates the ground, replenishing ground water and aquifers, naturally.

Pollutants such as car oil & brake dust are not conveyed into streams and rivers, where they would contaminate the environment. Instead they are filtered out and broken down by natural microbial action.

Sudpave™ Parking Markers





Sudpave™ Parking markers are manufactured to snap-fit into the paving grid. These markers can be used to produce parking bay lines, L-shapes, T-Shapes and Squares, T-junctions and access road centre lines.

Sudpave™ Specifications

Material	A blend of virgin / recycled HDPE
Colour Options	Black
Paver dimensions	500 mm x 500 mm x 38 mm + 27 mm Ground Spike
Installed Paver Size	500 mm x 500 mm - 4 Grids per m²
Nominal internal cell size	Round shape = 31 mm dia, Castellated 59 mm
Structure Type	Rigid wall, semi-closed cell construction
Cell wall thickness	Top - 2 mm Bottom – 4 mm
Weight (Nominal)	1 kg per grid
Load bearing capacity (filled)	< 2500 tonnes per m² sand filled < 3000 tonnes per m² gravel filled*
Crush Resistance (unfilled)	< 220 tonnes per m² *
Open cell %	Base = 75%. Top = 92%
Connection type	T section male/female clip
Interlock Mechanism	Push locking clip
Chemical Resistance	Excellent
UV resistance	High
Toxicity	Non-toxic

** As tested by CSIR. Loading rate – 15 MPa/minute. Temperature between 20 and 23° C*

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