



AQUAFLOW PERMEABLE PAVING

Inca Concrete Products invests in their customers

As open land is developed and covered with impervious surfaces such as asphalt roadways, concrete parking decks, and buildings, there is an increase in storm water runoff that may result in downstream flooding, stream bank erosion, and excessive strain on existing drainage facilities. Numerous studies indicate that storm water runoff is also the primary source of pollutants found in surface waters and often contains a toxic combination of oils, pesticides, metals, nutrients, and sediments.

Inca Concrete Products realised the world wide trend of permeable paving and have researched this innovative eco friendly technology in great depth. Inca Paving Specialists have travelled extensively internationally to determine the "best of breed" products, designs and methodologies and have made a considerable investment in the permeable block machinery, moulds and knowledge accumulation. Inca are fully geared to take on the vast South African permeable paving market however will remain in the forefront as a respected supplier in the conventional paving arena.

Cost Implications

Functional considerations such as the cost of permeable paving can have a cost premium over conventional paving. There may be additional unit costs if sub-surface reservoirs need to be installed. However, when installed as part of a good design, expensive storm water infrastructure such as curbing, storm sewers and treatment facilities can be downsized or eliminated, creating net savings. Over and above the savings, the following comparison should sway any concerned developer or construction professional.

Design and construction

Much of the design and construction is derived from experience with infiltration trench design, which has been used for years as a way to reduce storm water runoff and recharge groundwater.

The structural design regarding the sub grade found on site, the materials and thickness of the load -bearing base layers, the laying pattern of the paving blocks and the drainage surface are all crucial for the long - term success of the paving project.

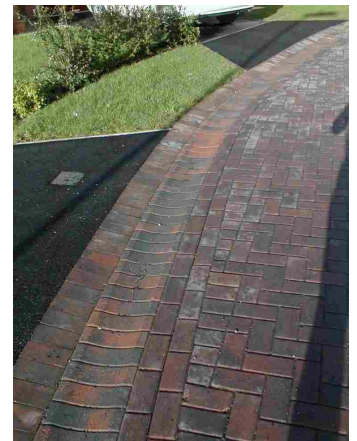
Permeable pavements should be designed by civil engineers, architects, or landscape architects familiar with storm water management concepts. To maximize the effectiveness of permeable paving, it should be used as part of the larger site design that utilizes a variety of techniques in dealing with run-off such as swales, roof rainwater collection, catchments, and strategic landscaping with native vegetation. Inca have put a support team in place to assist professionals to become more familiar with the favoured processes.



Aquaflow captures and infiltrates the entire stormwater volume so there is zero discharge from the drainage area. Costs for infiltrating or capturing all the run-off through the use of permeable pavements may be offset by reducing or eliminating pipes and other drainage appurtenances.



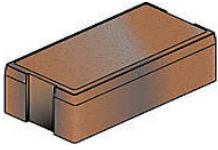
The **Aquaflow** block is one of the interlocking permeable pavers that Inca Concrete Products manufacture under license in South Africa. It has the structural support and stability of traditional concrete pavers, combined with the environmental benefit of storm water management



The "Green" Approach to Paving
Inca Concrete Products

Aquaflow Permeable Paving and Stormwater Source Control System

All of the Aquaflow blocks and slabs provide drainage through vertical channels and will allow water through the surface at a rate of approximately 9000mm per hour (9000 litres per m² per hour).

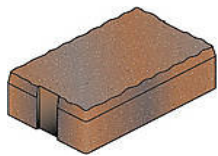


Aquaflow paving system delivers immediate environmental benefits and financial savings, when compared to traditional drainage. The system can also be used to harvest and reuse all water that falls on hard surfaces such as roofs and car parks, representing additional environmental benefits and cost savings



Over the past 15 years the 'Hanson Formpave Aquaflow' system has become the Flagship design for permeable paving. The unique sub-base cleans pollutants from run-off, creating a safe, PH neutral water for storage and re-use within the sub-base. Water can be captured from all impermeable areas; roofs, paths and driveways. It can be further stored in a tank and then pumped out for all exterior uses; gardens and car washing.

Inca Concrete Products hold the block design and methodology rights to Aquaflow Permeable Paving and Sustainable Urban Drainage Systems (SUDS) in the Western Cape. Hanson's Formpave offer is an *affordable* solution to the challenges of storm water disposal and treatment and water conservation, re cycling and reuse.



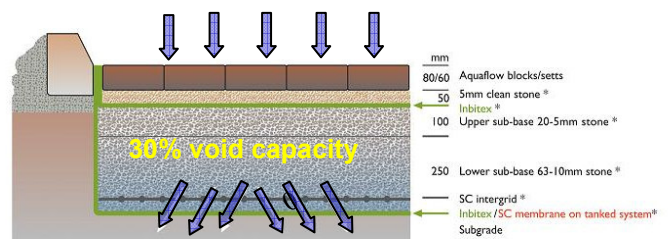
The entire Aquaflow Range can be made from special aggregates, and with special colours surface finishes all to special order.



Note the water retention on the asphalt and the dry area on the Aquaflow permeable paving

Typical Infiltration system with a sub-grade CBR of between 2-5%
Parking areas subject to trafficking by cars and vans only

2.5 Litres/ sec/ m²



Typical Infiltration System

Inca Concrete Products is one of the largest Black Economic Empowered concrete product providers in South Africa. Their message is very clear – they will continue to advance and improve their offerings to their customers whilst remaining steadfast in their sound business ideologies and principles.



Inca Concrete Products

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