

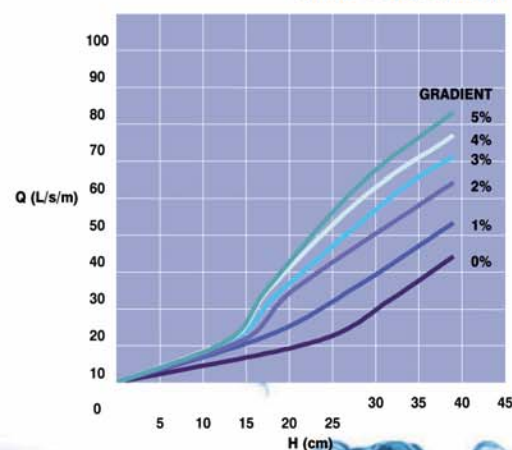
# AquaCell®

Iplex Pipelines provide a range of solutions for harvesting, treatment, detention and filtration of stormwater.

Services include design and supply or design, supply and install options to suit each individual client's needs.

**For further information or to arrange a quotation please contact the Iplex Technical Services Team**  
0800 800 262

**HEAD LOSS GRAPH**



## Technical specifications

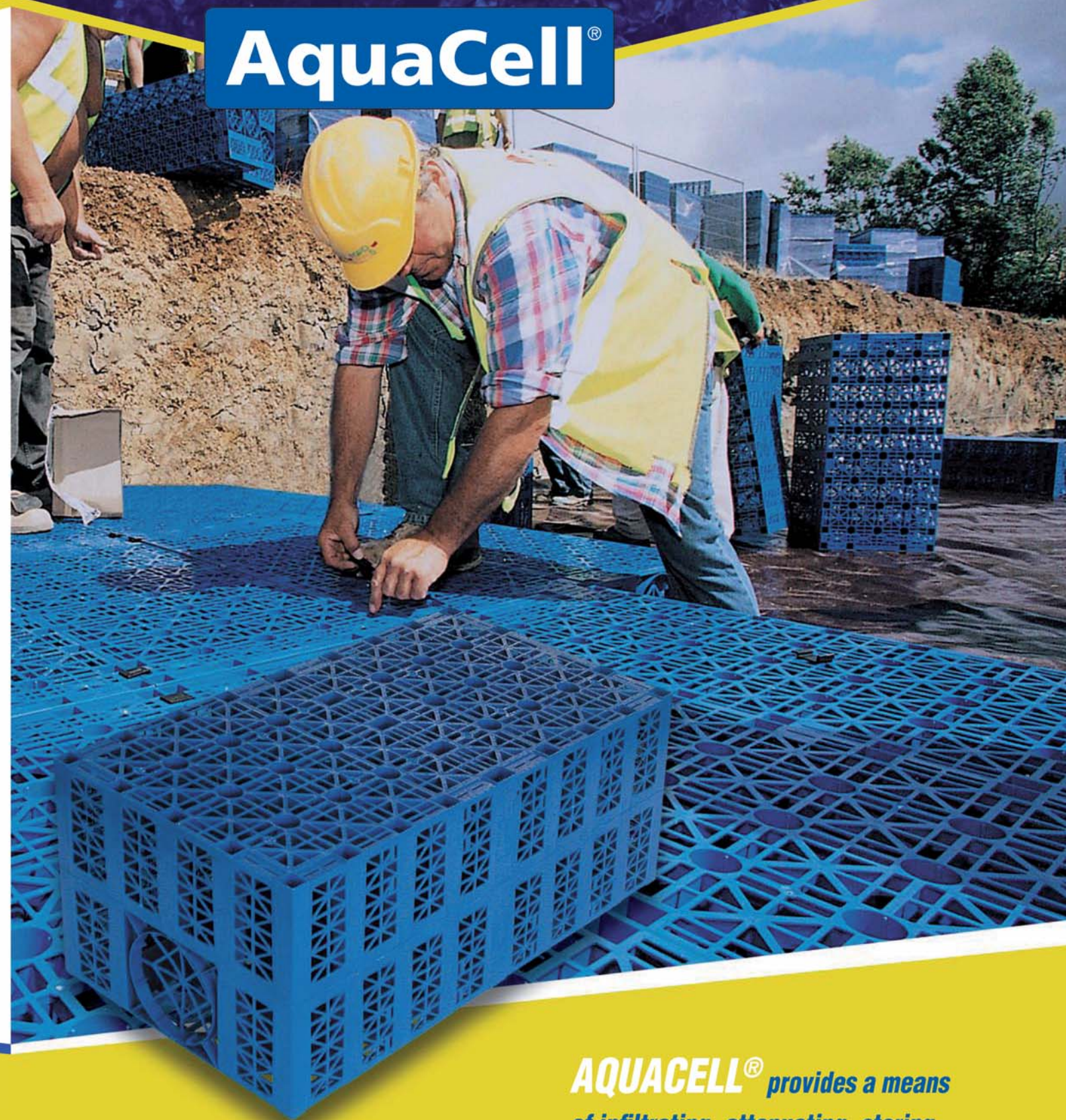
Width	500 mm
Length	1000 mm
Height	400 mm
Weight	9 kg
Void space	95%
Capacity	190 L
Load bearing capacity	560 kN/m <sup>2</sup>
Material	Polypropylene copolymer (food contact grade)
End connections	150 mm
Assembly principle	Units are clipped together in single layers and connected in multiple layers using clips and shear connectors
Wrapping	Assembled galleries are enveloped in either: <ul style="list-style-type: none"> <li>• an impermeable geomembrane for storage solutions, or</li> <li>• a permeable geotextile for infiltration applications</li> </ul>

## Minimum Cover Depths

Location	Minimum cover depth
Non trafficked areas, eg: landscaping	500 mm
Car parks, vehicles up to 2,500 kg gross mass	600 mm
Trafficked areas, vehicles greater than 2,500 kg gross mass	Contact Iplex

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# AquaCell®



**AQUACELL®** provides a means of infiltrating, attenuating, storing and conveying rainwater.

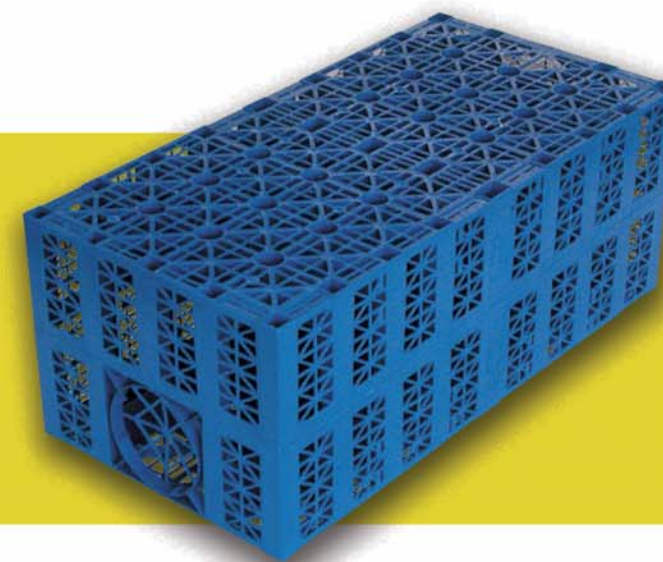
**IPLEX**  
Pipelines

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## THE KEY TO EFFECTIVE STORMWATER MANAGEMENT



*The majority of rain falling on natural land is absorbed into the soil, from where it infiltrates and recharges subterranean aquifers. As little as 20% of rainfall runs directly off the surface and into watercourses, which ultimately discharge to sea or lakes.*

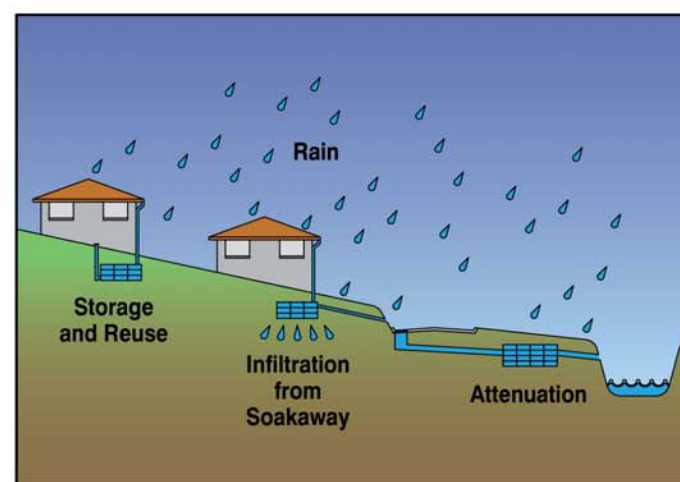
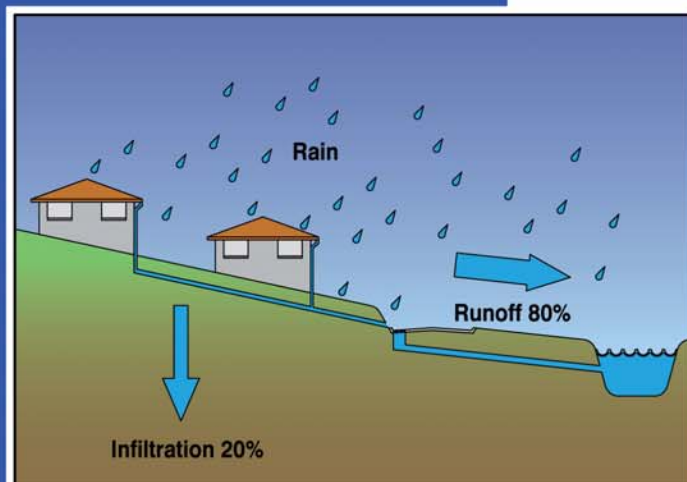
Residential, commercial and industrial developments result in a large proportion of virgin land becoming sealed by impermeable surfaces including roofs, parking areas and roads.

When rain falls on these surfaces, water rapidly flows into drains and is discharged into nearby watercourses. **Surface runoff can rise to 80% of total rainfall.**

As a consequence, following storms, watercourses receiving the runoff must cope with larger and more intense flows, creating an increased risk of flooding and soil erosion. Furthermore, the vastly reduced infiltration contributes to the depletion of groundwater reserves.

As a stormwater management option, rainfall can and should be harvested, stored and reused for garden watering, laundry and toilet flushing applications which combined can comprise up to 70% of a typical household's annual potable water use.

**AQUACELL® provides a means of infiltrating, attenuating, storing and conveying rainwater.**



## THE PRIMARY FUNCTION OF AQUACELL® IS THE MANAGEMENT OF STORM RUNOFF FROM IMPERMEABLE SURFACES

**AQUACELL® is utilised in four ways:**

### • INFILTRATION

Rainwater is collected in AQUACELL® galleries and allowed to seep into the surrounding soil over a period of time after the rain has stopped. To protect the gallery from silt and surface pollution, it is recommended that a stormwater quality improvement device be installed upstream.

### • ATTENUATION

Stormwater is collected in an AQUACELL® detention gallery and released at a reduced rate through a flow control device into an appropriate outfall. This reduces peak flows in the receiving waters / pipe outfall, thereby minimising the risk of flooding, erosion and potentially deferring the need to replace hydraulically inadequate stormwater pipes.

### • STORAGE AND REUSE

Rainwater from roofs is directed into an AQUACELL® storage tank discretely located beneath driveways, lawns, garages and other trafficable or non-trafficable surfaces. A Flow Control Filter Unit removes leaves and fine sediments from inflows, thereby protecting the AQUACELL® storage tank from siltation. Water collected in the tank is suitable for garden watering, laundry use and toilet flushing.

### • CONVEYANCE

To improve the performance of swale drains and filter strips, Iplex have developed the AquaSwale™, utilising AquaCell galleries under a structured turf zone to provide a low maintenance, low impact stormwater management solution.

AquaSwales are a tailored solution to meet the site-specific demands of both subdivisional and commercial developments, recognising the very differing climatic environmental constraints within New Zealand. AquaSwales can also provide infiltration, attenuation and water reuse options.

