AquaCell®

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/m²
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: • an impermeable geomembrane for storage solutions, or • a permeable geotextile for infiltration applications

HEAD LOSS GRAPH

Q (L/s/m) vs H (cm)

GRADIENT: 5%, 4%, 3%, 2%, 1%, 0%
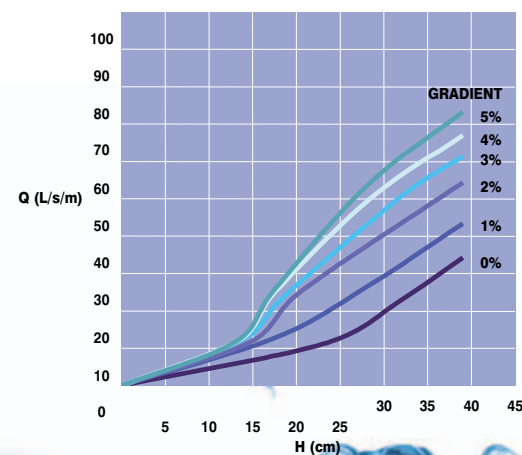
Minimum Cover Depths

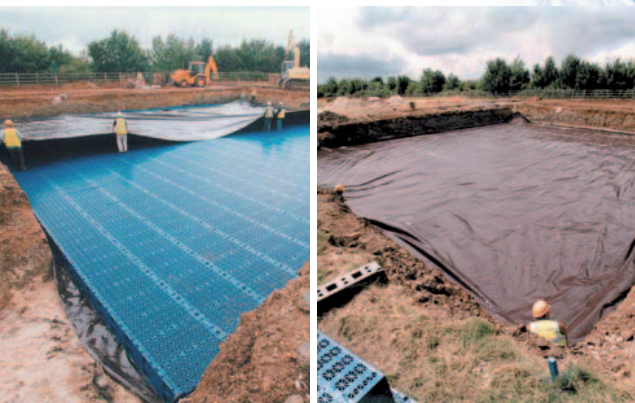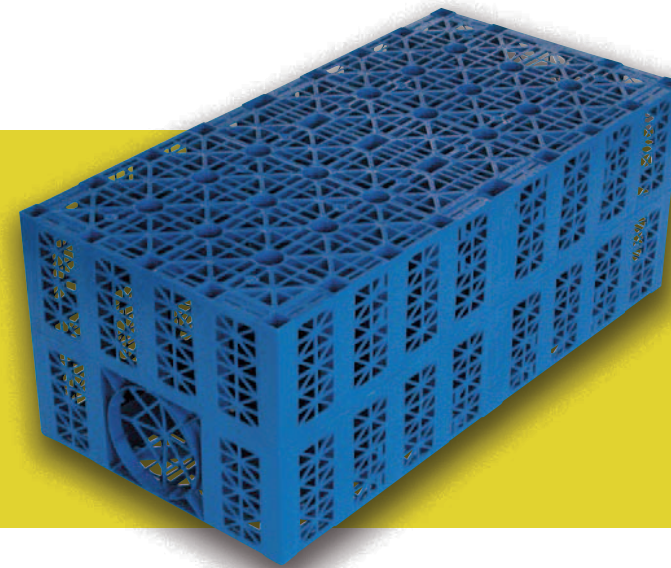| Location	Minimum cover depth
Non trafficked areas, eg: landscaping	500 mm
Car parks, vehicles up to 2,500 kg gross mass	600 mm
Trafficked areas, vehicles greater than 2,500 kg gross mass	Contact Iplex Pipelines
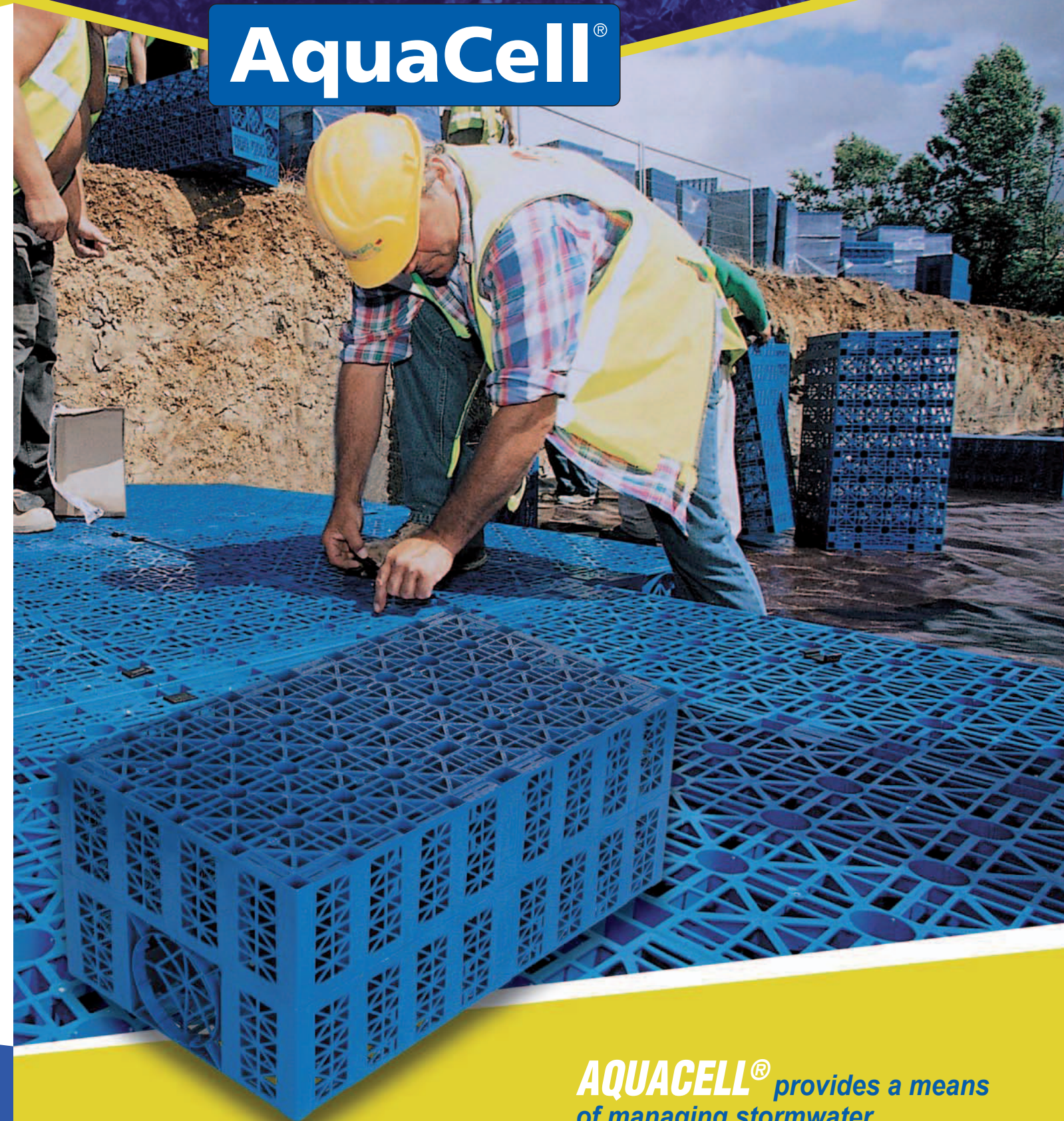
AquaCell®

AQUACELL® *provides a means of managing stormwater.*

AquaCell®

AQUACELL
STORMWATER MANAGEMENT

The majority of rain falling on natural land is absorbed into the soil, from where it infiltrates and recharges subterranean aquifers. Relatively little rainfall water 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. **urface runoff can rise to a large proportion 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 be harvested, stored and reused for non- potable applications, such as garden watering.

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® may be utilised for:

• 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 traffi cable or non-traffi cable surfaces. A 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 non- potable applications only, such as garden watering.

• CONVEYANCE
To improve the performance of swale drains and filter strips, AquaCell® galleries may be used 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 infitration, attenuation and water reuse options.

Rain

Runoff 80%

Infiltration 20%

Rain

Storage and Reuse

Infiltration from Soakaway

Attenuation

Infiltration

Attenuation

Storage and Reuse

Conveyance