



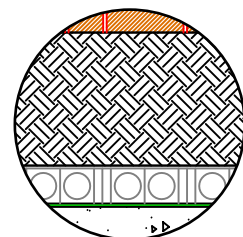
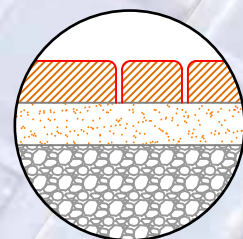
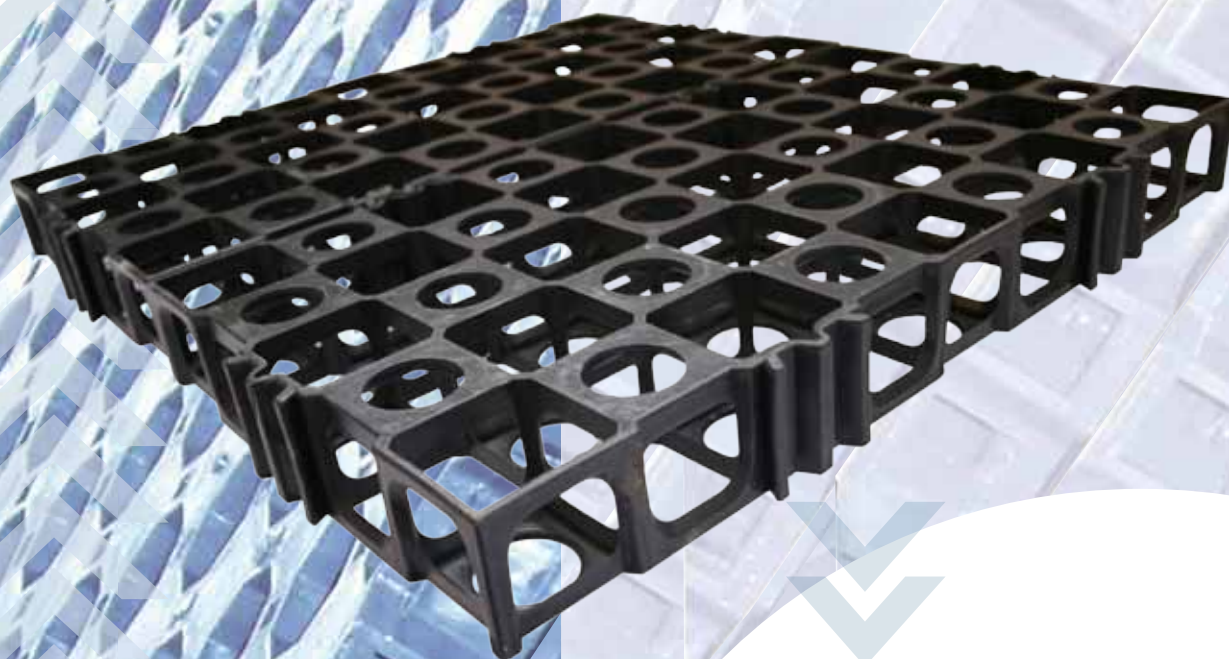
Modular Geo-Void Systems

Total Water Management

Aquadrain 50

Permeable Pavers

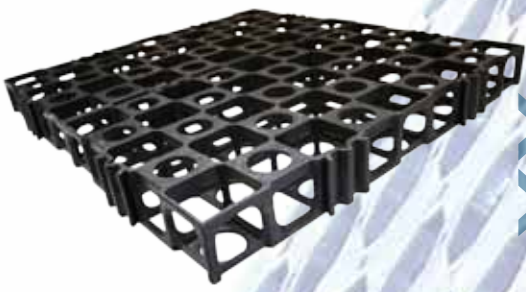
A precipitation drainage system and void former within porous paving/road systems



High Strength
125 tonnes/m

High Void Ratio
96%

Zero Deflection



Take Aquadrain 50...

the ideal drainage/void former in porous paving systems.

- Allows shallow dig formation
- The high void ratio of 96% combined with the above doubles the advantages when incorporating Aquadrain 50 in the shallow dig porous stone layer.
- One layer of Aquadrain 50 equates to the same volume as 138mm of single sized stone with a typical 35% void ratio.
- Aquadrain 50 can be installed directly below the block paver bedding layer in depths to suit volume requirements or in conjunction with single sized stone layer to reduce dig requirements.

Aquadrain 50 Datasheet

Width	500mm
Length	500mm
Height	50mm
Surface Area	96% void
Material	Polypropylene
Chemical Resistance	Good
Bacterial Resistance	Good
UV Resistance	Good

Ultimate Load/Unconfined Compression Testing

	Metric
Compressive Strength (ASTM D1621)	125t/m²
Flow Rate per unit width (ASTM D1621)	180 l/min

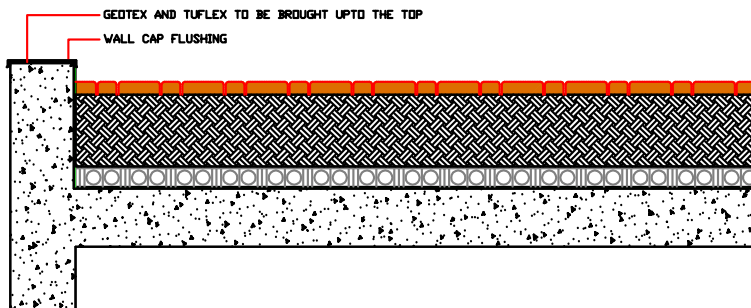
Long-Term Unconfined Creep Test: 42 Day Dead Load Creep Test

	Metric
Load Applied	500 kN/m²
Total Strain after 42 Days	No further displacement
Creep Sustained after 42 Days	No further creep
Temperature	20°C (+/-3)

Displacement (42 Days) in accordance with ASTM D1621

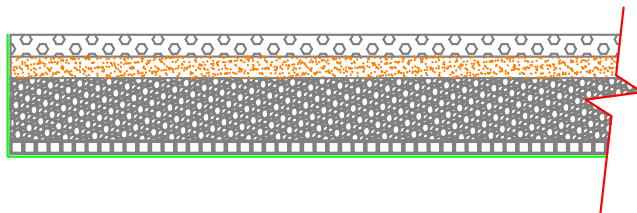
Water Temp (°C)	Water Temp (°F)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Mean Deformation
20	68	5.2%	4.8%	4.1%	5.6%	5.2%	5.0%
30	86	6.1%	5.3%	5.8%	5.4%	6.4%	5.8%
40	104	6.4%	6.2%	6.8%	7.1%	6.2%	6.5%
50	122	7.5%	7.6%	7.1%	7.8%	8.3%	7.7%

Typical Details



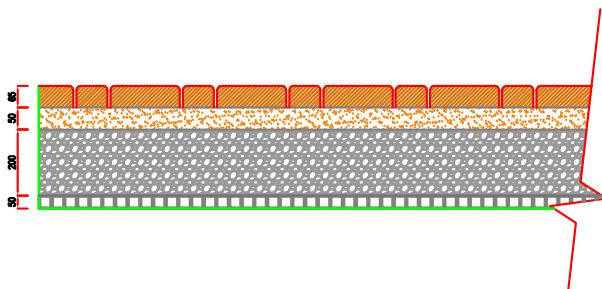
1. Paving block or other buffer equivalent
2. 200mm filter/water retention media
3. 3mm thick geotex 225 ff wrapped around 52mm thick ESS Drainage Cell
4. 3mm Geotex 300PP permeable protection fabric
5. Tuflex impermeable geomembrane root barrier
6. Structural concrete deck

Typical Section through Extensive Car Park



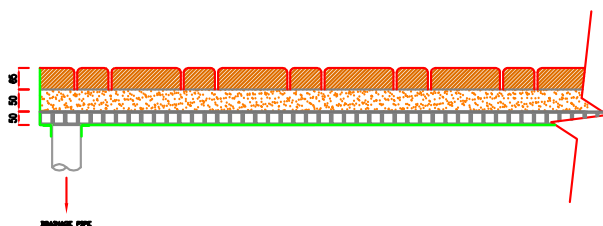
1. ESS Aquadyne Porous Surfacing (1000mmx220mmx45mm)
2. 50mm free flow compacted sand bedding
3. 300mm thick, 5mm graded granular free flow material
4. ESS 52mm Drainage Cells to be wrapped with permeable Geotex 225 FF with 300mm lapped joints (as supplied by Alderburgh Ltd.)
5. ESS 52mm Drainage Cells (260mm wide x 52mm high x 480mm long). Arrangements as shown, modules to be linked together in accordance with, and as supplied by Alderburgh Ltd

Typical Section through Traditional Car Park Drain



1. Permeable block pavers
2. 50mm free flow compacted sand bedding
3. 200mm thick, 5mm graded granular free flow material
4. ESS AquaDrain 50 Drainage Cells to be wrapped with permeable Geotex 225 FF with 300mm lapped joints (as supplied by Alderburgh Ltd).
5. Wrap the whole with Tuflex impermeable geomembrane

Typical Section through ESS Car Park Drain Solution



1. Permeable block pavers
2. 50mm free flow compacted sand bedding
3. ESS AquaDrain 50 Drainage Cells to be wrapped with permeable Geotex 225 FF with 300mm lapped joints (as supplied by Alderburgh Ltd).
4. Wrap the whole with Tuflex impermeable geomembrane

Typical Section through ESS Car Park Drain Solution

Aquadrain 50

All products are manufactured to the highest quality, being subject to rigid quality control. However, the company cannot control conditions of application and use of its products, thus any warranty, written or implied, is given in good faith for materials only. ESS Ltd will not accept any responsibility for damage or injury arising from storage handling, misapplication or misuse of its products. All transactions are subject to our standard condition of sale, copies of which are available on request.

To find out more about these systems and products please contact us



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