

Bioretention Soil

Sustainable urban drainage systems are designed to move water in a manner that controls the release into the main sewer system or into attenuation or harvesting systems for re-distribution into irrigation and smart drainage systems. With this in mind, we designed Bioretention Soil with the CIRIA SuDS Guidelines in mind.

Benefits:

- Designed to meet the requirements of a grey water management system
- High quality sands and green composts
- Efficient permeability rate to avoid water-logging
- Withholds sufficient nutrient levels

Typical Analysis:

	Bioretention Standard	Bioretention High Performance
Substrate Density		
Bulk density when oven dried	1.40 g cm ⁻³	1.16 g cm ⁻³
Water and Air		
Total Porosity	38.6%	42.9%
Saturated Hydraulic Conductivity	2.1mm min ⁻¹ 126.00 mm hour ⁻¹	6.2mm min ⁻¹ 372.0 mm hour ⁻¹
Chemical		
Organic Matter (weight)	3.0%	3.6%
pH	7.3	6.9%
EC	3.06	3.06
Plant Available Phosphate	287 mg l ⁻¹	270 mg l ⁻¹
Plant Available Potassium	901 mg l ⁻¹	942 mg l ⁻¹
Total Nitrogen	0.19%	0.17%
Lead	7.1 mg l ⁻¹	4.7 mg l ⁻¹
Nickel	0.6 mg l ⁻¹	0.9 mg l ⁻¹
Copper	4.0 mg l ⁻¹	4.8 mg l ⁻¹
Cadmium	0.1 mg l ⁻¹	0.1 mg l ⁻¹
Zinc	5.5 mg l ⁻¹	7.0 mg l ⁻¹
C:N Ratio	9.2	12.3

Typical Analysis:

	Bioretention Standard	Bioretention High Performance
Particle Size Distribution		
Stones (> 8mm)	0.0	3.8
Coarse Gravel (8 - 4mm)	17.1	22.6
Fine Gravel (4 - 2mm)	16.7	17.1
Very Coarse Sand (2 - 1mm)	4.2	4.5
Coarse Sand (1.0 - 0.5mm)	1.9	1.9
Medium Sand (0.5 - 0.25mm)	23.0	18.0
Fine Sand (0.250 - 0.125mm)	25.2	21.0
Very Fine Sand (0.125mm - 0.050mm)	5.8	5.3
Silt (0.050 - 0.002mm)	3.6	2.9
Clay (< 0.002mm)	2.5	2.9

