



The Green Roof Mix has been developed to provide a stable substrate that can sustain plant life while maintaining volume over time. Scapeworks Australia has installed large trial plots and monitored them over a 6 year period to ensure the green roof media used is the best available. It is also tested independently. Not only that, but Scapeworks Australia Green Roof mix has been given a certificate of compliance with the requirements in the soil publication by Leake and Haege, no easy feat. Available upon request.

As there is no appropriate Australian Standard for Green roof media yet, Green Roof Mix is tested to the Australian Standard 3743 Potting Mix non specialist (Regular Grade). We also test the Bulk Density to the Australian Standard 4419: 2003 Soils for Landscaping and Garden Use – Organic Soil Analysis. It is also tested with the 6 Point Hydraulic Conductivity Test. We use the standards as a tool only. The mix is also tested against Specification E3 Low Density Container and Green Roof from the text Soil for Landscape Development by Leake and Haege. Scapeworks Australia staff add important nitrogen sources, plenty of calcium, micro and macro nutrients and pH adjusters if needed.

## Test Results:

February 2024

Physical Properties	Unit	Target Range	Results	Comments
Texture	-	Loamy Sand - Sandy Loam	Loamy Sand	Acceptable
Air-Filled Porosity	%	≥ 5	20	Acceptable
Water-Holding Capacity	%	≥ 45	46.7	Acceptable
Permeability (@16 Drops)	mm/hr	> 100	870	Acceptable
Organic Matter	% w/w	< 25	32	Slightly High Due to Ash
Wettability (AS4419)	min	≤ 2	3.09	Slightly High
Dispersibility	Category	1 or 2	1	Acceptable
Large Particles				
< 2 mm	% ww	30 - 70	44.2	Acceptable
2 -10 mm	% ww	15 - 30	36	Slightly High
10 - 20 mm	% ww	5 - 10	14.1	Acceptable
20 - 50 mm	% ww	< 5	5.58	Acceptable
> 50 mm	% ww	0	0	Acceptable
Saturated repacked Density	kg/L	< 2.4	1.16	Acceptable
Chemical Properties	Unit	Target Range	Results	Comments
pH in water (1:1:5)	pH units	5.4 - 6.8	6.77	Acceptable
Electrical Conductivity	dS/m	< 2.2	1.16	Acceptable
Chloride	mg/ L	≤ 200	200	Acceptable
Ammonium-N (NH <sub>4</sub> )	mg/ L	≤ 100	0.3	Acceptable
Ammonium-N + Nitrate-N (NH <sub>4</sub> + NO <sub>3</sub> )	mg/ L	≥ 50	5.0	Low
Nitrogen Draw-Down Index	-	≥ 0.7	0.01	Low
Bioassay	mg/ L	≥ 70	158	Acceptable
Phosphorus	mg/ L	3/8 - 40	4.2	Acceptable
Potassium	mg/ L	50 - 250	206	Acceptable
Sulphate (SO <sub>4</sub> )	mg/ L	> 40	60	Acceptable
Calcium (Ca)	mg/ L	≥ 80	73	Slightly Low
Magnesium (Mg)	mg/ L	≥ 15	30	Acceptable
Ca:Mg Ratio	Ratio	1.5 - 10	2.4	Acceptable
K:Mg Ratio	Ratio	1 - 7	6.9	Acceptable
Sodium (Na)	mg/ L	≤ 130	100	Acceptable
Iron (Fe)	mg/ L	≥ 35	30.6	Slightly Low
Copper (Cu)	mg/ L	0.4 - 15	0.7	Acceptable
Zinc (Zn)	mg/ L	0.3 - 10	1.7	Acceptable
Manganese (Mn)	mg/ L	1 - 15	5.29	Acceptable
Boron (B)	mg/ L	0.02 - 0.65	0.179	Acceptable



Hydraulic Conductivity – 32 drops (heavy compaction) – 870mm/hr  
Saturated bulk density = 1.16kg/L. Dry bulk density = 0.52kg/L

Laboratory recommendations are implemented when the Green Roof Mix is the predominant growing media in the podium and where corrections need to be made. Scapeworks staff add important nitrogen sources plenty of calcium, micro and macro nutrients and pH adjusters if needed.