

SPACE Structural Soil

Material

SPACE Structural Soil is to provide a suitable growing environment for tree roots while meeting the requirements for supporting load bearing pavements. Structural soil media for tree root trenches below pavements shall conform to the following performance criteria.

Properties table

Property	Performance Criteria
Load bearing capacity	High structural strength, with CBR (California Bearing Ratio) of at least 15
Bulk density	Low bulk density, not exceeding 1.2 tonne / m ³ (at 95% standard compaction)
Water infiltration	High infiltration rate, not less than 100 mm/hour
Porosity	High AFP (Air filled Porosity) minimum 30%
Cation exchange	High Cation exchange capacity sustained by non-biodegradable components such as clay colloids.
Nutrient levels	Provides macro and micronutrients in quantum and balance appropriate to tree species and existing site soil.
Soil reaction (pH)	pH in range 6-8 dependent on species tolerance
Structural stability	High structural stability with self-mulching index exceeding 50%

The physical properties of the medium should remain stable over the life of the tree. Dependence on initial inclusion of biodegradable elements in the mix such as composted material, hydrogels (polymers), or foam resins to achieve performance standards at time of installation are not considered to be acceptable.

Samples

Submit representative samples of structural soil media, packed to prevent contamination and labelled to indicate source and content. Provide 5kg sample at least 5 working days before bulk deliveries.

Placing structural soil

Structural soil to be installed in accordance with supplier's installation guidelines and code of practice.

Trenches to be backfilled with structural soil media as shown on drawings.

No backfill is to be placed until the Superintendent has approved the works to be covered and the structural soil materials to be used for backfilling.

Structural soil to be spread in layers of sufficient thickness to provide the design thickness after compaction in accordance with engineer's requirements.

All structural soil layers to be systematically compacted to engineers requirements with appropriate compaction equipment to ensure the full depth and width of each layer.

The contractor shall adjust the moisture content of the structural soil media to achieve the specified moisture content prior to compaction.