PREFAB TREE PIT VRGE03001



By SEL Environmental

The Prefab Urban Tree Pit is designed to intercept existing road gullies and divert run off into the adjacent urban tree pit(s). The urban tree pit is prefabricated from recycled plastic units which are very strong, lightweight, interlocking void formers, strong enough to replace subbase and robust enough to construct urban tree pits whilst providing 95% void ratio to give impressive rainwater attenuation and soil aeration facilities. The Prefab Urban Tree Pit has a combined flow control, odour control and non-return valve chamber immediately downstream which in turn is connected back to the previously intercepted gully pipework.



Cost Effective

Prefabricated & Modular

Space Saving

Optimum Growing Conditions

Tree Performance Monitoring & Control

Combined Attenuation & Passive Irrigation

Integrated Air Void to Control Root Growth & Reduce Soil Compaction

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Partially Submerged Partially Protruding

The Prefab Urban Tree Pit is most effective when installed partly below ground level and partly above. The best arrangement seems to be no more than 450mm into the ground with the remainder above. Limiting the depth of excavation firstly avoids underground services and secondly helps ensure the hydraulics of the system work well with respect to the invert levels of the existing gully pipework. The overall construction thickness of most highway pavements (roads) is at least 450mm therefore when considering retrofit SuDs, it is a relatively safe bet that underground services will be left undisturbed by limiting the depth of the pit excavation to 450mm and by elevating the top of the pit thus forming an attractive feature above ground level, the tree can still enjoy the ideal depth of soil (1m or more if needed).





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Passive Irrigation

The outlet pipe arrangement retains 50mm depth of water even after the complete evacuation of the attenuation portion of the tree pit. This retained water is made available to the soils in the tree pit using the patented capillary cone system which provides passive irrigation on demand. The tree only receives the amount of water it needs which not only conserves water, it also prevents saturation of the tree soils. This system also provides the ideal conduit to give a plentiful oxygen source for healthy root growth, and reduced soil compaction.



Attenuation & Flow Control

During storm conditions, the flow control chamber will limit the pass forward flow to the desired pre-set limit. Water will back up and begin to surcharge into the attenuation unit, sized to accommodate sufficient water during the designed storm event. Once the storm has subsided, water will continue to be released from the system at the limited discharge rate for some time to substantially and sustainably reduce the peak run off. The tree pit itself is effectively drained during this phase to prevent drowning of roots.

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Sizing



Can be designed to suit specified tree

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Typical Layout





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