

MICRO PILES



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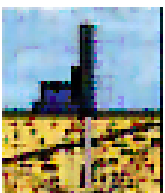
SUSTAINABLE TECHNOLOGY



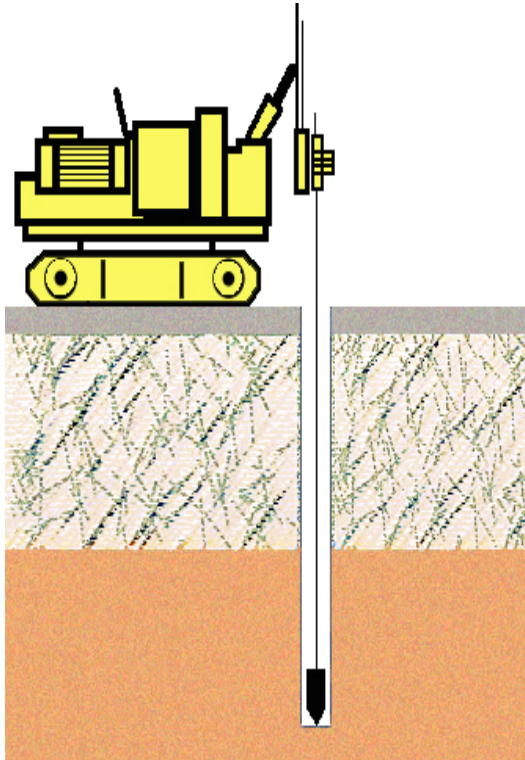
Micro piles are a system of soil inclusions using steel bar reinforcement and cement grout combinations with or without steel casing that are mainly used as friction piles to take tensile or compressive loads.

This drilled and grouted piling system with single or multiple steel bar reinforcing is generally from 125 up to 300 mm in diameter.

Micro piles can be placed with relatively small drilling equipment using down the hole hammer technology, single or in groups, under limited access and low headroom conditions for underpinning, strengthening and supporting compressive loads, bracing, take-up of bending and tensile loads, resistance to negative friction, wall systems, where subsurface conditions such as karstic limestone, dense urban fills, and glacial till challenge conventional piling operations, etc.



Micro Piles



A micro pile is a drilled and grouted replacement pile that is typically reinforced. It is constructed by drilling a borehole, placing reinforcement, and grouting the hole.

Different drilling techniques may be used.

Grouting operations have a major impact on micro pile capacity. Grouts are designed to provide high strength and stability, but must also be capable of being pumped. The placed grout is required to serve a number of purposes:

- It transfers the imposed loads between the reinforcement and the surrounding ground.
- It may form part of the load-bearing cross section of the pile.
- It protects the steel reinforcement from corrosion.
- Its effects may extend beyond the confines of the drill hole by permeation, densification or fissuring.

Group Recent References

Whitfords Shopping City (WA, Australia) – Westfield
 Condor Towers (WA, Australia) – Q-Con
 Narrow Bridges (WA, Australia) – Marine & Civil
 Bunbury Centre Point (WA, Australia) – Devaugh
 Worsley Alumina (WA, Australia) – Devaugh
 Fremantle Performing Arts Centre (WA, Australia) – V& G Fazio
 Royal Perth Hospital (WA, Australia) – Transfield
 Claremont Show Grounds (WA, Australia) – Derwent Construction

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