TECHNiBLOCK
"WE'RE ON THE LEVEL"
ACN 007222488
Reg'd Builders: Domestic & Commercial
FOUNDATION REPAIR PROFESSIONALS

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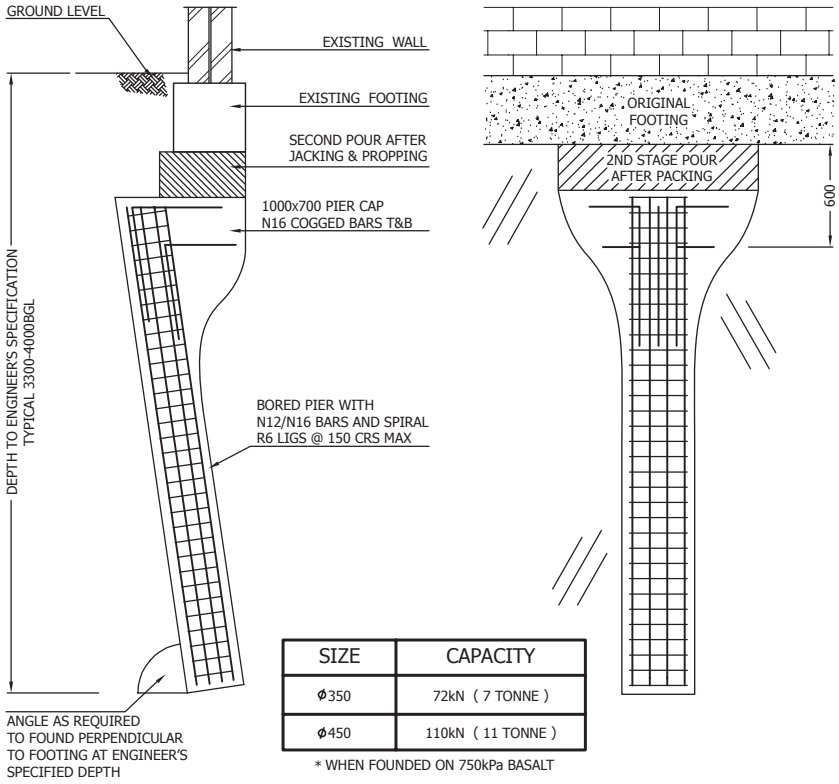
MICROPILE UNDERPINNING INFORMATION SHEET

Micropile Underpinning is the process where an engineer-designed steel reinforced concrete pile is installed to provide support to existing footings when the most appropriate remedial solution requires founding depths typically between 3 – 10 mts below ground level. The pile is constructed integrally with a reinforced concrete pile cap which extends under the original footing, providing a solid platform to jack and support the building off.

Micropiling is the latest generation of underpinning design, and is the preferred option over conventional mass pad underpinning or screw pile underpinning, particularly where founding depths are required in excess of 2000mm below ground level.

This drawing on the right illustrates the detail for a typical Micropile Underpin.



SIZE	CAPACITY
ϕ350	72kN (7 TONNE)
ϕ450	110kN (11 TONNE)

* WHEN FOUNDED ON 750kPa BASALT

ADVANTAGES of the Techniblock Pty Ltd Micropiling system include:

1. The Micropile is typically founded at a depth below the zone of influence of trees, broken drains, etc., generally around 3300mm to 4000mm below ground level, to provide a stable long term foundation base. In certain situations the pile depth may be increased as required to meet engineering requirements.
2. The pile cap is lighter and placed at a shallower depth than mass pad underpins. This allows the surface tension and pressures of the surrounding reactive foundation soils to facilitate some rise and fall of the pier in the event of general site heave in accordance with ongoing soil movements across the site. As a result differential movement and resultant structural distress which can occur between underpinned and non underpinned sections of the building is minimized.
3. The excavation is completely sealed with concrete, stopping ingress of moisture as can occur with formed mass pad underpins and particularly with screw piling. Such moisture ingress has been identified historically as causational of both heave and settlement movements and consequential *ongoing* structural distress.
4. The ability of hydroscopic action in the reactive clay soils which can cause undesired lateral movements of mass pads (and consequential structural distress) is greatly minimized.
5. The cost/performance ratio is favorable compared to all other forms of underpinning in cases where deep founding is required due to reactive or problem sites, particularly in tight access situations, which we specialize in.

To discuss this process in greater detail contact martin@techniblock.com.au or call Martin Coates on 9762 3000 or 0411 816 777.