

TIMBER POLE DEEP PILE FOUNDATION



New residential housing development, Otahuhu, Auckland, NZ

Foundations were required for a new residential development for emergency housing in Otahuhu, Auckland.

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Project background: New residential housing development, Otahuhu, Auckland, NZ

- 50 new residential dwellings for emergency housing were to be built.
- The project was completed in 2017.

Project challenge:

- The ground conditions were very soft.
- The ground was highly contaminated so could not be disturbed.
- The project site was busy with many contractors working at the same time.
- Installation needed to be rapid.
- Unloading and handling needed to be easy.
- H5 treated Radiata Pine timber poles were determined as the best solution given the soft ground conditions.

The NZ Ground Control solution:

- MultiPole Uglie poles, 2.4 to 4.8m x 250mm, 2500 pieces, were used.
- MultiPoles are incredibly versatile timber poles with a unique hollow core.
- MultiPole Uglie poles are similar to SED poles but are debarked rather than peeled. They offer greater skin friction when used as piles and are stronger than SED poles.
- The unique hollow core of the MultiPole allowed for fast installation via high-frequency vibration – 3 to 5 house foundations were installed daily.
- Poles were larger in diameter than usually required due to the very soft ground conditions.
- Gravel was placed over the contaminated ground and the poles were vibrated through the gravel. This ensured the contaminated ground was left in situ, and undisturbed.

