

STONE COLUMNS / VIBRO REPLACEMENT



GFWA

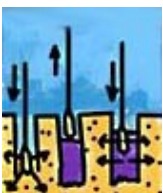
SUSTAINABLE TECHNOLOGY



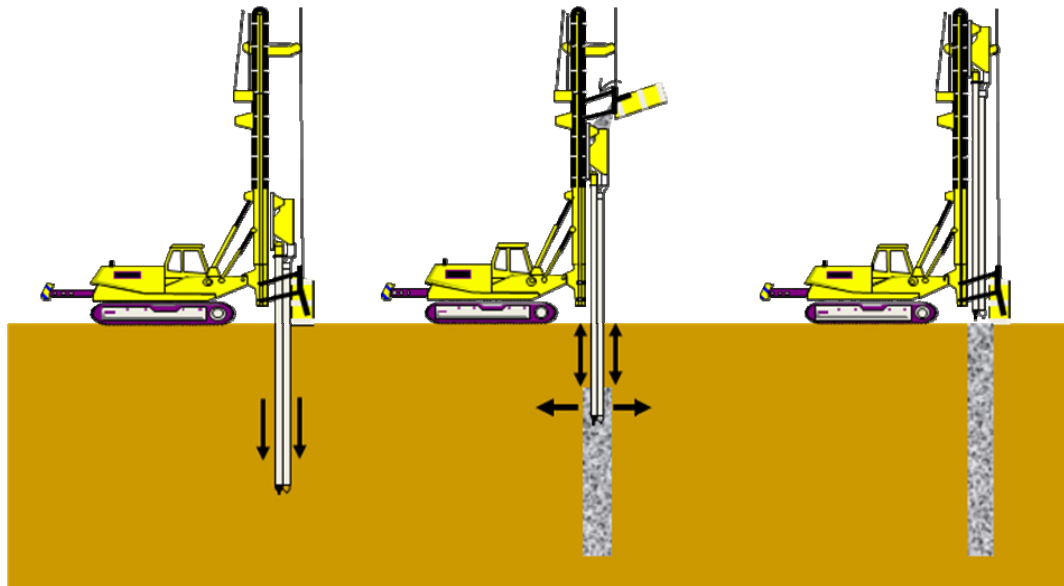
Vibro Replacement (Stone Columns) improves the strength of deep saturated cohesive soils using a vibroflot.

The penetration of the vibroflot in the soil produces a cavity that is subsequently filled with gravel, either from the top of the hole by the top feed method or from the bottom of the hole using a bottom feed system.

The vibroflot is pulled out of the ground in incremental steps. In each step the gravel is compacted by pushing the vibroflot against it, thereby compacting the introduced material, achieving the desired radial size and constructing a “stone column” with load bearing properties and vertical drainage effects.



Installation of Stone Columns by the bottom feed method



Port of Brisbane - Fisherman Island



The ground at the site of the general purpose berth of Port of Brisbane is composed of marine muds overlaid by imported and consolidated sands.

Stone columns using the bottom feed wet method with a maximum length of 21 m were used to improve the ground conditions along the rockwall.



Recent References

- Darwin East Arm Port (NT, Australia)
- South Beach, Fremantle (WA, Australia)
- Coogee Chemicals, Kwinana (WA, Australia)
- Fisherman's Island GPB (QLD, Australia)
- RG Tanna Coal Terminal (QLD, Australia)
- Port of San Diego (USA)
- Port of Dunkirk (France)

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