



Vibro Compaction is an established ground improvement method for stabilising granular soils such as loose sands, gravels and some hydraulic fills. The technique is primarily used for seismic mitigation and in-situ densification of loose sands up to 30m deep.

## // BASIC TECHNIQUE

A vibroflot is penetrated to the required design depth, assisted by water jetting from the nose cone. Upon reaching design depth water jetting is reduced before the vibroflot is slowly extracted, with pauses at regular intervals to ensure satisfactory levels of compaction are achieved at each depth.

The vibroflot is withdrawn back to the surface where a zone of compacted ground is formed around the insertion

point. Additional site won sand may also be added at the top of the hole in order to fill the cone of depression that is formed. The rate of extraction is varied to suit the conditions encountered onsite and to ensure that the correct amount of densification is achieved for each project.



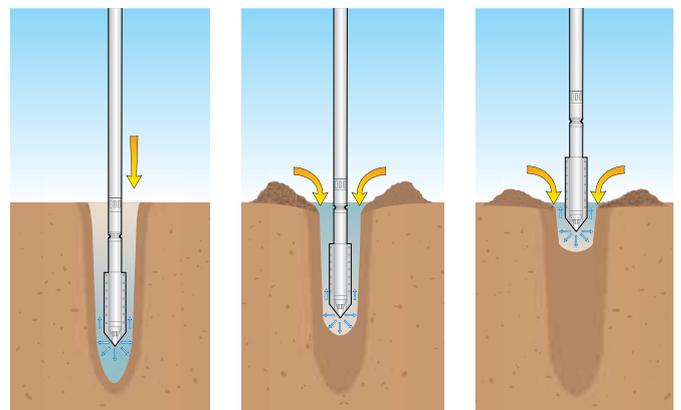
## // APPLICATIONS

The water jetting and horizontal vibratory action of the vibroflot acts to compact the loose soils into a denser condition and significantly improve the bearing capacity of the treated ground. The vibro compaction technique is well established for use in tank farm, port and marine structure projects.

BBGE has developed the world's largest and most powerful range of vibroflots for deep compaction projects - the BD400 series. The increased size and power enables a wider compaction radius to be achieved, leading to savings in costs and programme times.

## // STRENGTHS

- Vibro Compaction significantly reduces the threat of liquefaction in the event of earthquakes; densifying sands to provide a firm founding layer
- Vibro Compaction is extremely effective for sand compaction and land reclamation projects, especially in the Middle East, North America and the Mediterranean
- Vibro Compaction provides fast, in-situ densification of loose sands to depths of up to 30 metres and is one of the most economical and sustainable ground improvement methods available, with no spoil generated and no fill material required



VIBRO COMPACTION CONSTRUCTION SEQUENCE

## FOR FURTHER INFORMATION CONTACT:

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