

Vibro Stone Column Specialists



Case Studies



Derrys Refrigerated Transport



Aldi & Costa Coffee Rathnew



Bachelors Avenue Housing Development

About us

Roxborough Ground Improvement is a Ground Improvement Company based in Northern Ireland which specialises in the installation of Vibro Stone Columns. Our aim is to provide a sustainable, economical and time saving method of ground improvement safely and efficiently, creating strong relationships with clients, across the UK and Ireland, who have 100% satisfaction in our service.

Our experienced personnel provide a complete package involving Design, Installation and Testing of Vibro Stone Columns (VSC's).

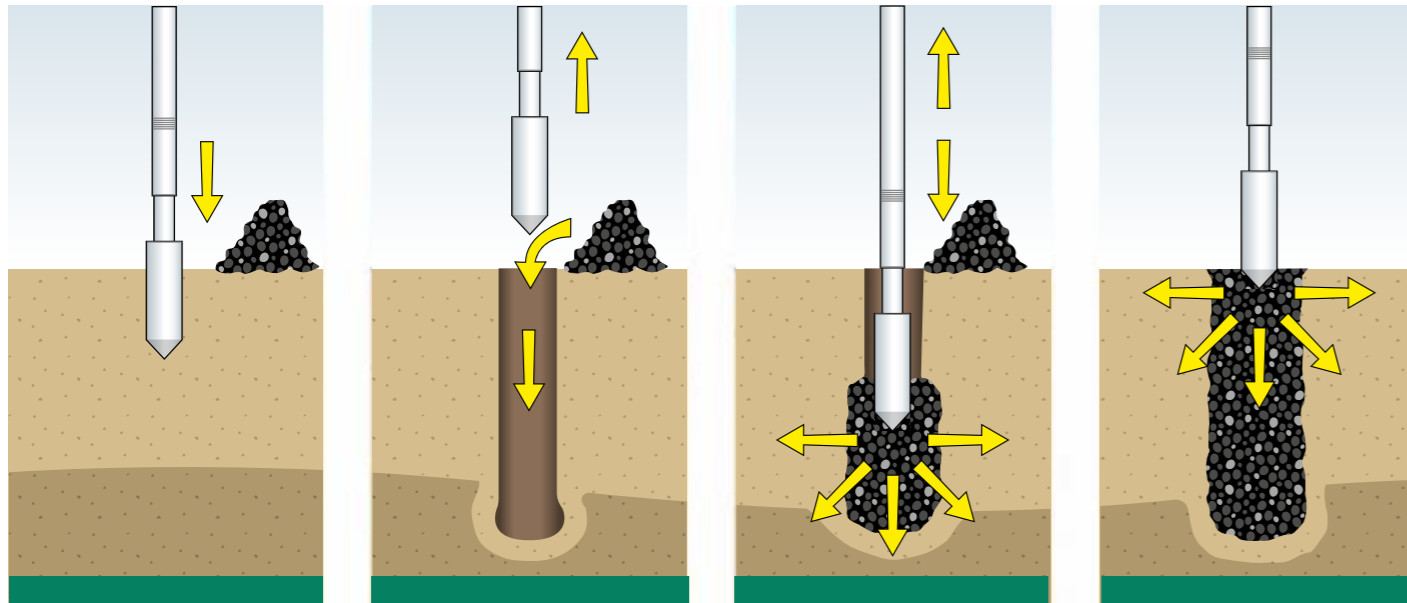
Vibro Stone Columns are a quick and efficient method of ground improvement which provide significant savings over other ground improvement and piling methods. They can be used to support foundations or to stabilise large areas. The method also enables the use of normal strip foundations after the installation of columns.

Previous projects benefitting from Vibro Stone Columns have included Housing Developments, Warehouse's, Embankments and Car Parks, creating major time and financial savings.



Vibro Stone Columns

Vibro stone columns (VSC's) are a ground improvement technique which improves weak soils with the installation of densely compacted columns made from stone or aggregate via vibration.



The vibrating vibroflot on the purpose built rig penetrates the ground until reaching the required design depth for the columns.

The vibroflot is then raised out of the hole and aggregate is poured in via a hopper on the rig.

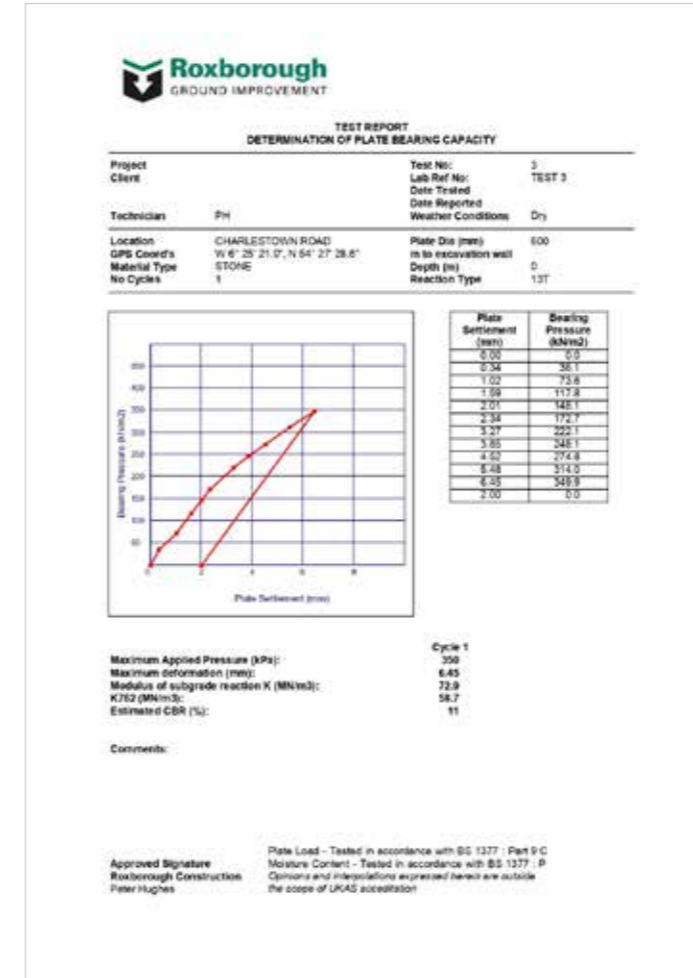
The vibroflot is then lowered again compacting the stone within the soils around it. This process is repeated until there is a densely compacted column created.

The stone columns and the confining soils form an integrated foundation support system having low compressibility, improved load bearing capacity and decreased settlement. In cohesive soils the columns act as reinforcement and provide a drainage path for excess pore water.

Plate Testing

Roxborough Ground Improvement also provide a plate testing service, using an advanced GPS data logger, this enables us to determine results immediately which can be emailed in a report from site to ensure they meet the requirements of the contractor and engineer. This report includes settlement figures, CBR values and a graph showing different loading points and pressures.

By providing this service, this enables us to get a better understanding of sites before our design process while also allowing us to see immediate results of our ground improvement technique.



Sample Plate Testing Service Report.



Advantages of Vibro Stone Columns:

- ✓ A **very versatile** Ground Improvement method that can be adjusted to a wide variety of soil conditions and foundation requirements.
- ✓ A **time and cost-effective** solution when dealing with poor ground. As there is no spoil this ensures there is no expensive waste to landfill. The method enables the contractor to utilise standard shallow footings which, in turn, leads to additional savings.
- ✓ Vibro Stone Columns require no cement, concrete or steel, along with being spoil free, this considerably reduces the carbon footprint to make Vibro Stone Columns a very **sustainable ground improvement solution**. Recycled aggregates can also be used for installation when available.
- ✓ **Lower noise and vibration** compared to traditional piling methods makes it an ideal method for works near existing buildings or environments.

Contact Roxborough Ground Improvement and we can advise if Vibro Stone Columns are suitable for your project.

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