

Bien Dong 1 Yard Upgrade

Vung Tau City, Vietnam

Keller carried out Vibro replacement works without disturbance to the on-going operations in the yard. Our proposed ground improvement solution was more environmentally friendly compared to the initial plan of removal and replacing of soft soil reinforced within geo-cell.



The project

Bien Dong 1 project involved the construction of one of the largest oil rigs in Vietnam. The foundation geotechnical requirements within the yard included a bearing capacity of up to 500kPa (heavy service crane) and limiting settlements during operation.

The challenge

The soil on site comprises of about 1m of well compacted sandy gravel, followed by up to 1.5 m of medium dense silty sand and another 10 m of soft marine clay. This is underlain by firm to stiff sandy clay. The site presented a number of challenges including space constraints and operating nearby to structures.

The solution

Keller designed and built a ground improvement solution using both the wet top feed and dry bottom feed Vibro Replacement technique. The dry bottom method uses Keller's specialized equipment that requires less operating space and no environmental impact.

A total area of 28,000 m² was successfully completed in 7 months.

Project facts

Owner(s)

Bien Dong OPC Vietnam

Keller business unit(s)

Keller ASEAN

Main contractor(s)

PTSC Mechanical & Construction

Solutions

Bearing capacity / settlement control

Markets

Infrastructure

Techniques

Vibro stone columns

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