

GROUND IMPROVEMENT FOR BROOKE DOCKYARD'S CRANE PLATFORM

SARAWAK, MALAYSIA



Key achievements

- Introduced alternative stone column solution that produced considerable savings to the owner.
- Introduced Cone Penetration Test method to Sarawak and was received positively

• The project

Brooke Dockyard & Engineering Works Corporation is a fully owned Government Statutory Body focusing on marine engineering, oil & gas, ship building and repair, bridges and onshore manufacturing sectors.

• The challenge

The ground consisted of very soft to soft silt/clay up to approximately 33m below the ground underlain by a hard strata. For the construction of the yard, Keller was contracted to design and construct ground improvement works specifically where the crane working area was to be constructed. The optimal solution was identified as vibro replacement, a method that had not previously been performed in Sarawak.

• The solution

As this would be the first use of the method, the local Keller team connected with the global knowledge of Keller to ensure the method was constructed with best practice and awareness of local conditions. A floating stone column design was implemented consisting of alternate shallow and deep primary and secondary columns. Bi-directional geogrid was also incorporated into the platform. Having successfully introduced a new technique the project was completed on time, marking another milestone for Keller in Sarawak.

Application

Ground Improvement/Bearing Capacity

Technique

Vibro Replacement

Market

Manufacturing

Client

Brooke Dockyard and Engineering Works Corporation

Main contractor

Keller (M) Sdn Bhd

Contract Value

MYR 20,000,000

Keller business unit (s)

Keller ASEAN