

Sindalah Island Stage 3B

Neom, Saudi Arabia

Sindalah Island, situated in NEOM Bay near the Aqaba Gulf, is set to become a luxurious hub of high-end living.



The project

With a project area of 790,000 sqm, the focus is on providing exclusive sea views and adhering to sustainability protocols. Sindalah aims to set new standards in sustainability, technology, renewable energy, smart solutions, and urbanization.

The challenge

The project's major challenges included meeting a demanding completion schedule due to its offshore location. Transporting materials by boats and barges from the mainland posed significant production hurdles. Additionally, there was a hard crust of coralline limestone, 3m deep from the surface while the depth of ground improvement ranged from 8m to 13m. Overcoming these obstacles was crucial for the project's success.

Equipment and material movement in tight workspace, was efficiently managed.

The solution

Keller designed 90cm Ø stone columns, varying in depth from 8m to 13m, to enhance the ground bearing capacity to 200kPa. Keller completed ~14,000 m² of ground improvement by vibro-replacement, on time, with two vibro-units working in double shift. The top 3.0m of hard crust was predrilled with a piling rig. The bearing capacity was confirmed by conducting zone load tests up to 300kPa that were all successful.

The high safety standards adopted, resulted in an accident-free work environment.

Project facts

Owner(s)

NEOM

Keller business unit(s)

Keller Turki Company Ltd. - Saudi Arabia

Main contractor(s)

Nesma & Partners Contracting Co. Ltd

Solutions

Bearing capacity / settlement control

Markets

Institutional / public

Techniques

Vibro stone columns