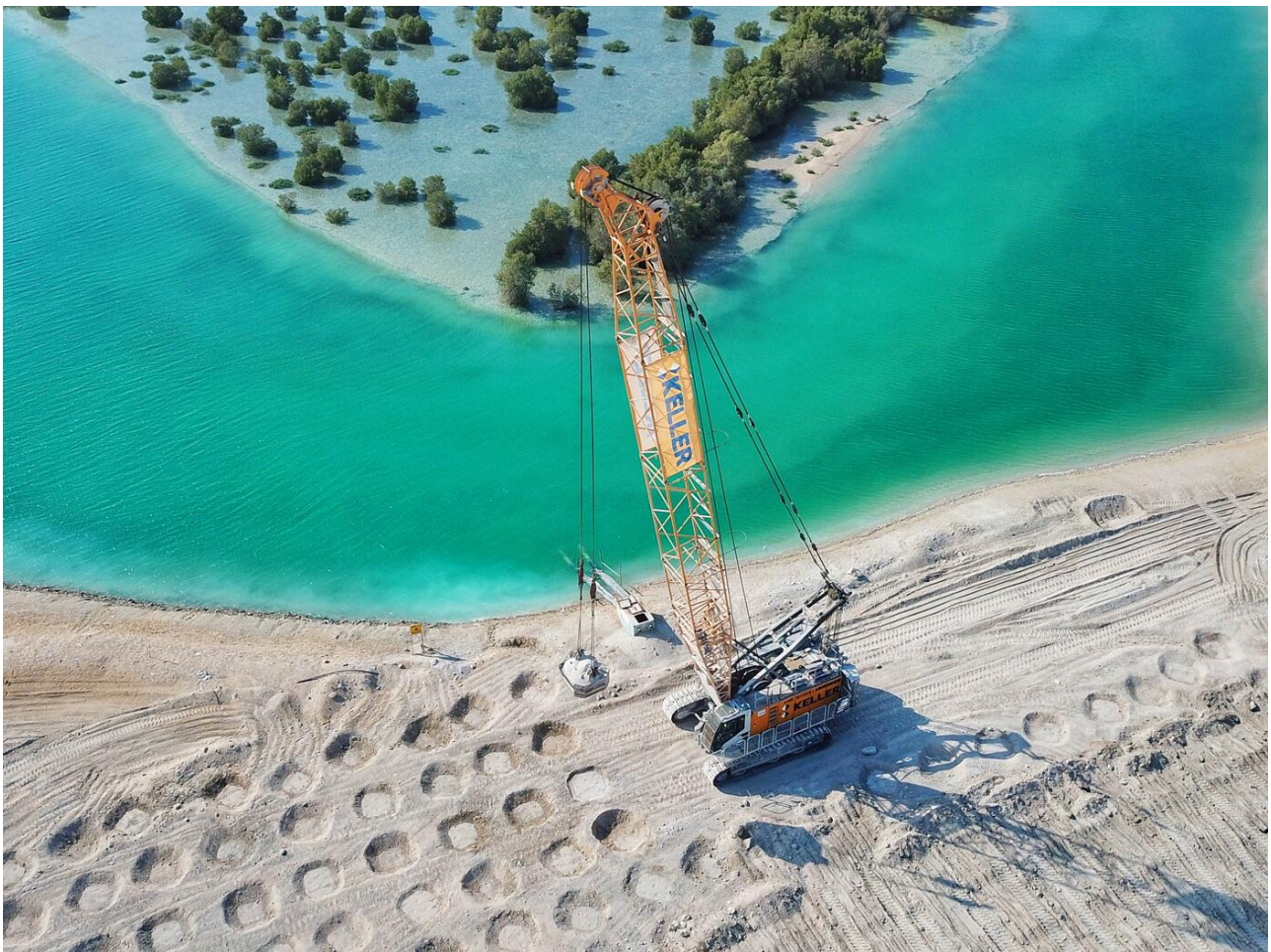


Jubail Island

Jubail, Abu Dhabi, UAE

Ground Improvement for heterogynous soil profile by applying different ground improvement techniques.



The project

Jubail Island Project is located in Jubail Island in Abu Dhabi – U.A.E. The project involves the construction of villas, parks, shopping and dining facilities, children's play areas, a clubhouse, a swimming pool, parking and associated facilities.

As part of the prestigious Jubail Island Project, Keller delivered tailored ground improvement solutions using a diverse range of advanced techniques.

The challenge

Required precise engineering solutions and careful execution. One of the primary difficulties was the heterogeneous soil profile. Additionally, working in close proximity to existing structures. The project was also fast-tracked, necessitating efficient execution without compromising quality or safety. Furthermore, the high load requirements for the (MSE) wall added another layer of complexity, requiring reinforced ground improvement solutions to ensure long-term performance and stability.

The solution

Keller's expertise and strategic approach enabled the successful completion of the project while meeting all technical and timeline requirements.

Keller implemented the most effective ground improvement techniques to meet the required design criteria which included Rapid Impact Compaction, Dynamic Compaction, Dynamic Replacement, Vibro Replacement and Rigid Inclusions. Each method was meticulously selected and implemented to address varying soil conditions and meet specific design criteria across multiple project locations, ensuring optimal performance and lasting results. All that, within the allocated schedule.

Keller successfully applied ground improvement methods for projects including villas, roads, substations, and MSE walls.

Project facts

Owner(s)

Jubail Island Development

Keller business unit(s)

Keller Grundbau GmbH

Main contractor(s)

GCC

Solutions

Ground improvement

Markets

Residential

Commercial

Techniques

Dynamic compaction

Dynamic replacement

Rapid impact compaction (RIC)

Vibro stone columns

Rigid inclusions