

RECLAMATION FOR RESORTS WORLD SENTOSA

SENTOSA, SINGAPORE



- **The project**

Resorts World Sentosa built an integrated resort in Sentosa Island, Singapore. Part of the development required reclamation of approximately 64,000 square meters at the northern part of the island.

- **The challenge**

The excavated soil from the Casino basement area was used to reclaim two pieces of land at the waterfront. As the soil was placed in wet conditions, the ground was very soft and required strengthening for future development.

- **The solution**

Keller proposed Deep Soil Mixing for the reclamation fill and soft clay. The works were carried out using modified twin-shafts LRB155 and single shift Soilmec machine and performed to stiff silt layer. A total of 20,000 DSM columns were constructed with columns lengths between 5 m to 14 m.

Plate load tests were also carried out on constructed columns at working load where it showed settlement less than the specified maximum settlement.

Key achievements

- Provided cost effective design and build solution to client
- Suitable machine type mobilized enabling easy movement on site and timely completion

Application

Ground Improvement

Technique

Deep Soil Mixing

Market

Commercial – Amusement & Recreation

Client

Resorts World Sentosa

Main contractor

McConnell Dowell South East Asia Pte Ltd

Contract Value

Keller business unit (s)

Keller ASEAN