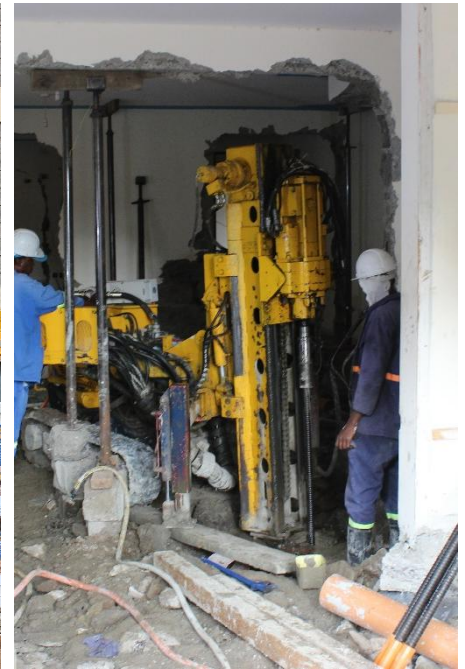


PROSPER APARTMENT UNDERPINNING

Athi River, Nairobi, Kenya



Project Facts

Product

R38N Micropiles

Market

Residential

Client

Dunhill Consulting Limited

Main Contractor

Frankipile International Projects Ltd. Kenya Branch

Key Achievements

- Repair of eight, 4 storey residential apartment blocks.
- Quality assurance procedures to avoid costs and time in re-work.
- Completion of contract within the contractual timeline.

About the project

Underpinning of four storey residential buildings which were settling excessively due to collapse settlement. Franki Africa, in partnership with Dunhill Consulting Limited, installed and designed micropile underpinning respectively to cater for the loads as per the soil conditions within the area.

Challenges

The main challenge was the installation depth of the micropile as the soils within the area proved to be highly variable. Vertical R38N micropiles were installed in limited access, in the narrow-restricted building, without any disruption to the building's primal structural elements.

The Solution

Micropiles were installed onto the existing foundation position, with a new pile cap to tie the building with the drilled micropile. Test piles were done, 12m and 6m long, with a maximum tensile and compressive working capacity approaching 400kN.

Depths varied with the soil condition from 10m to 15.5m, as refusal within the rock strata was encountered on drilling the micropile.