

ODTÜ KIBRIS'LA BİLİM EĞLENCELİDİR.

Eco Friendly Sustainable Solution for Soil Treatment Project

Civil Engineering Department, METU Northern Cyprus Campus

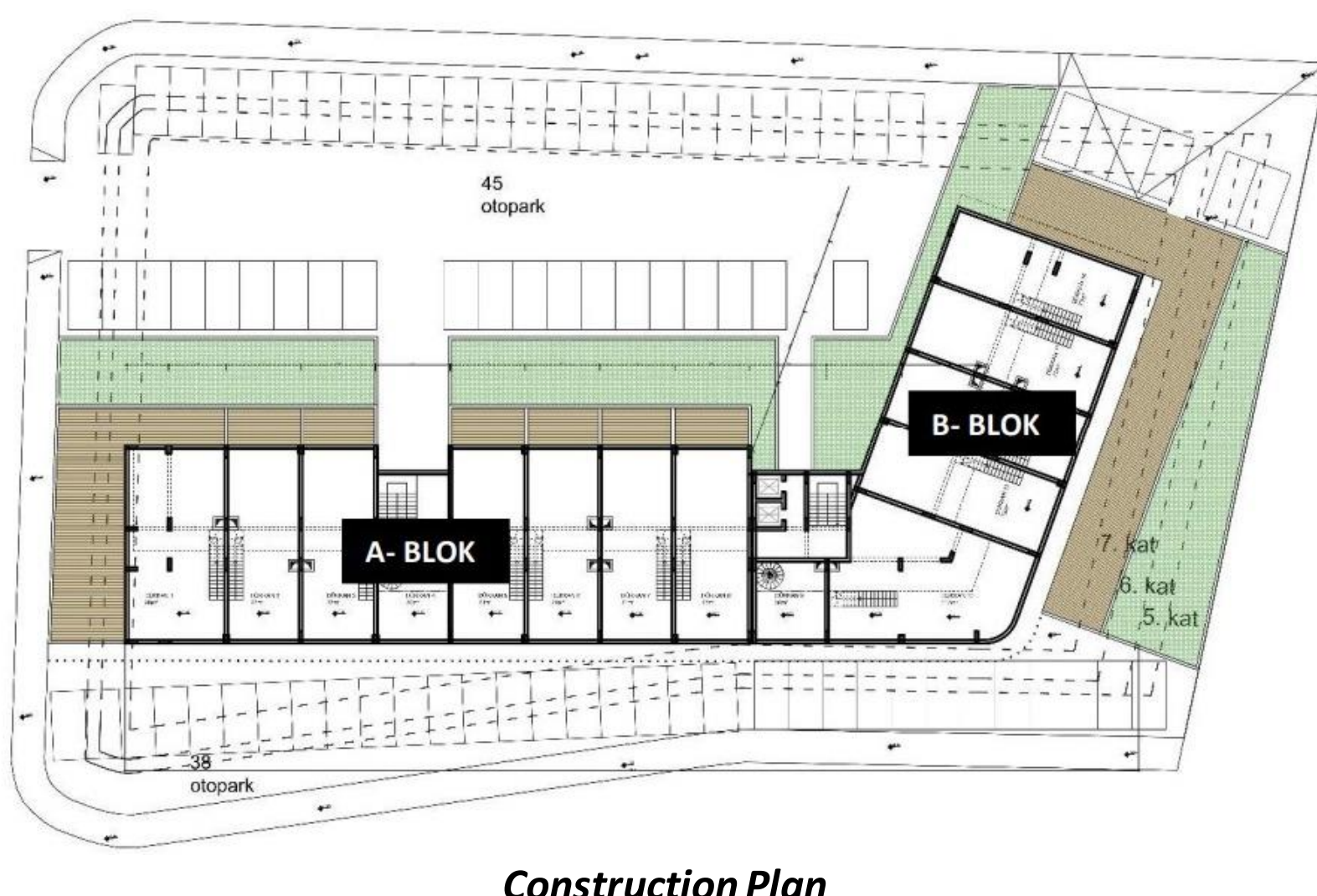
Project Team: Batuhan Esirger, Mustafa Masood Shalbak, Onur Baran Katak, Canberk Yalçıklı, Bahadır Yıldız

Introduction and Statement of the Problem

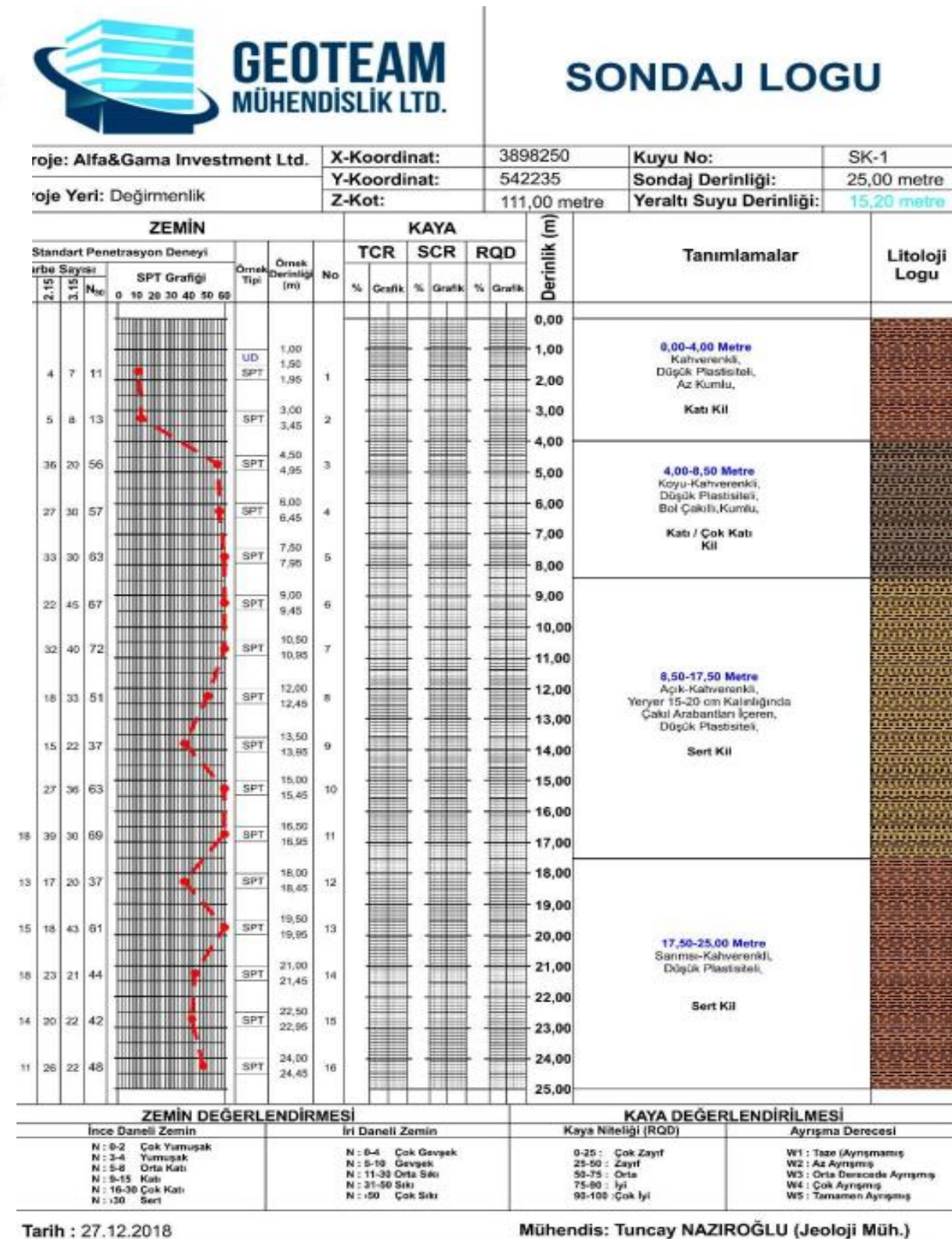
A ten-storey apartment will be constructed. However, the soil of the site is weak soil and it is needed to be stabilized for improving the strength. The one of the traditional methods is cement treatment application. Cement usage improves the mechanical properties of the soil. On the other hand, cement production and usage has high amount of carbondioxide emission. Non-ecofriendly properties of the cement has raised awareness of cement replacement materials and processes in geotechnical applications. Therefore, fly ash will be one of the alternatives thanks to its eco-friendly, high strength and low-price properties.



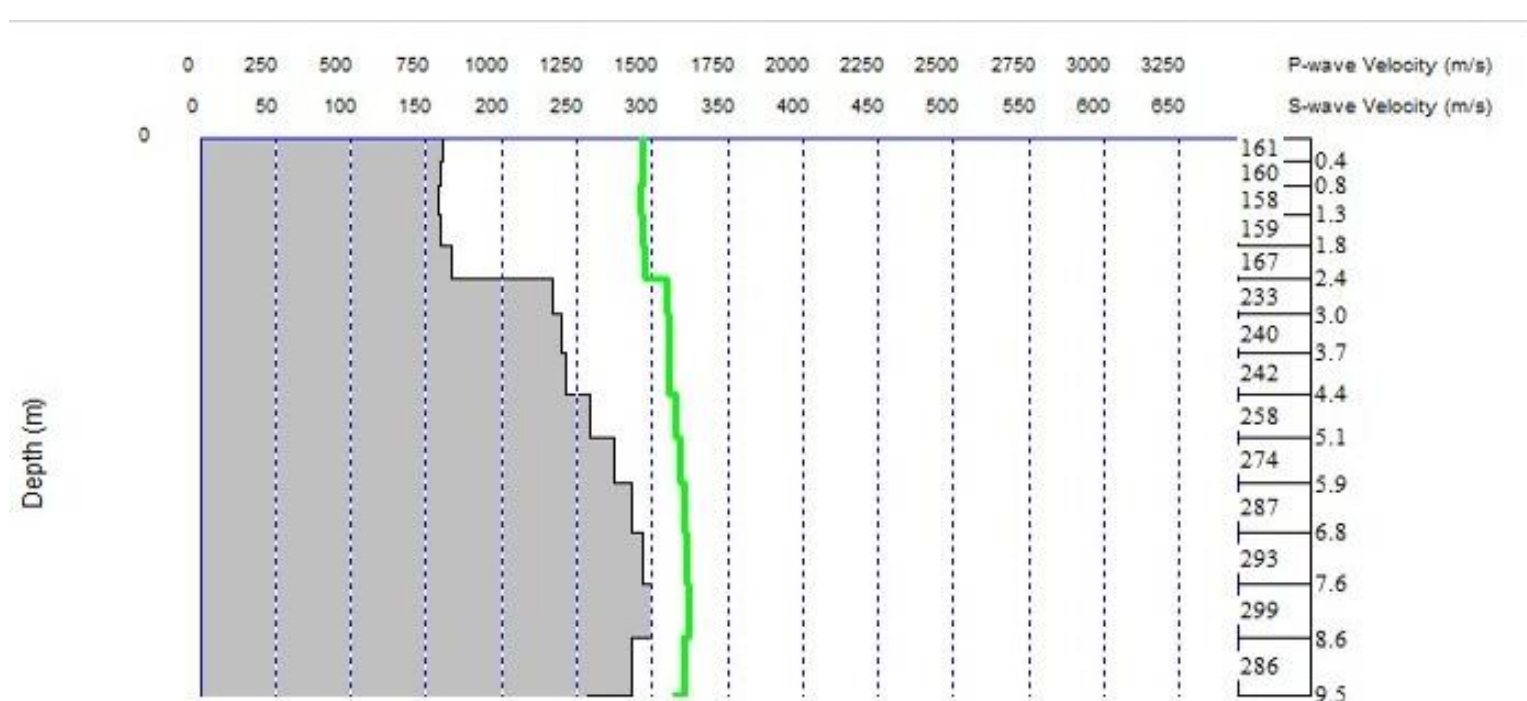
Construction Field



Construction Plan



Borehole 1 Results



Treatment Required for First 1.3 m



Demonstrates Shallow Depth Excavation



Fly Ash



Cement



Demonstrates Spreading of Cement by Workers



A Scene From Aeration of Soil



Placing Cement Bags

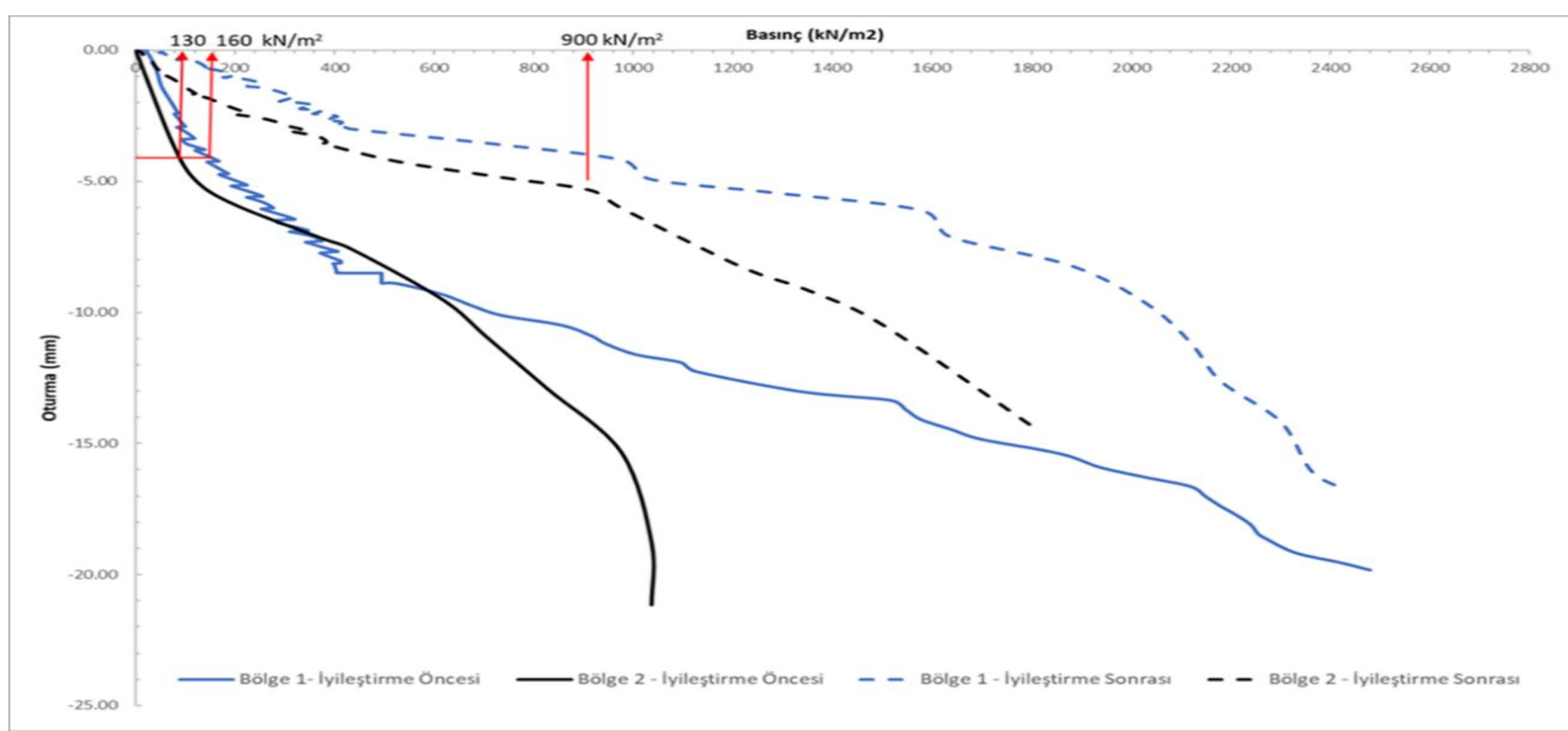
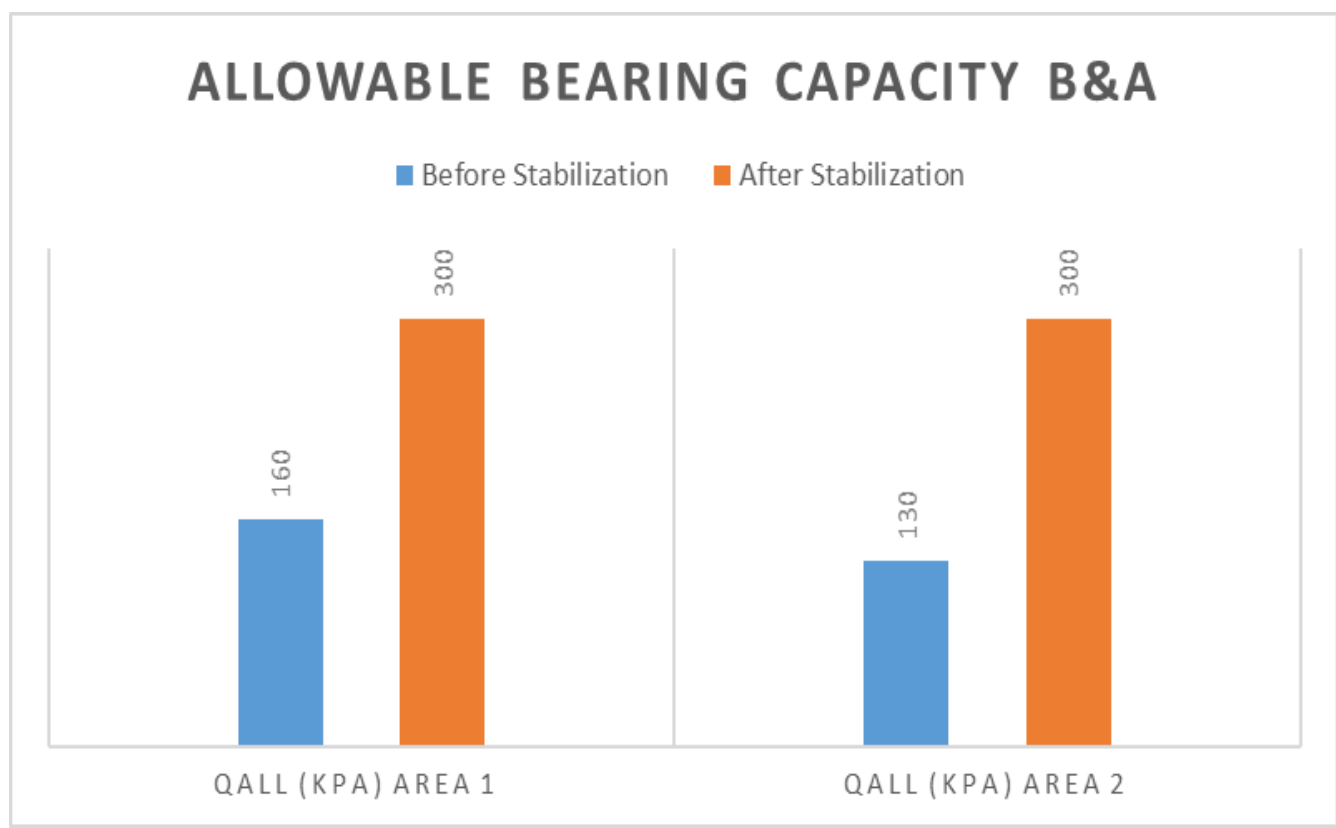
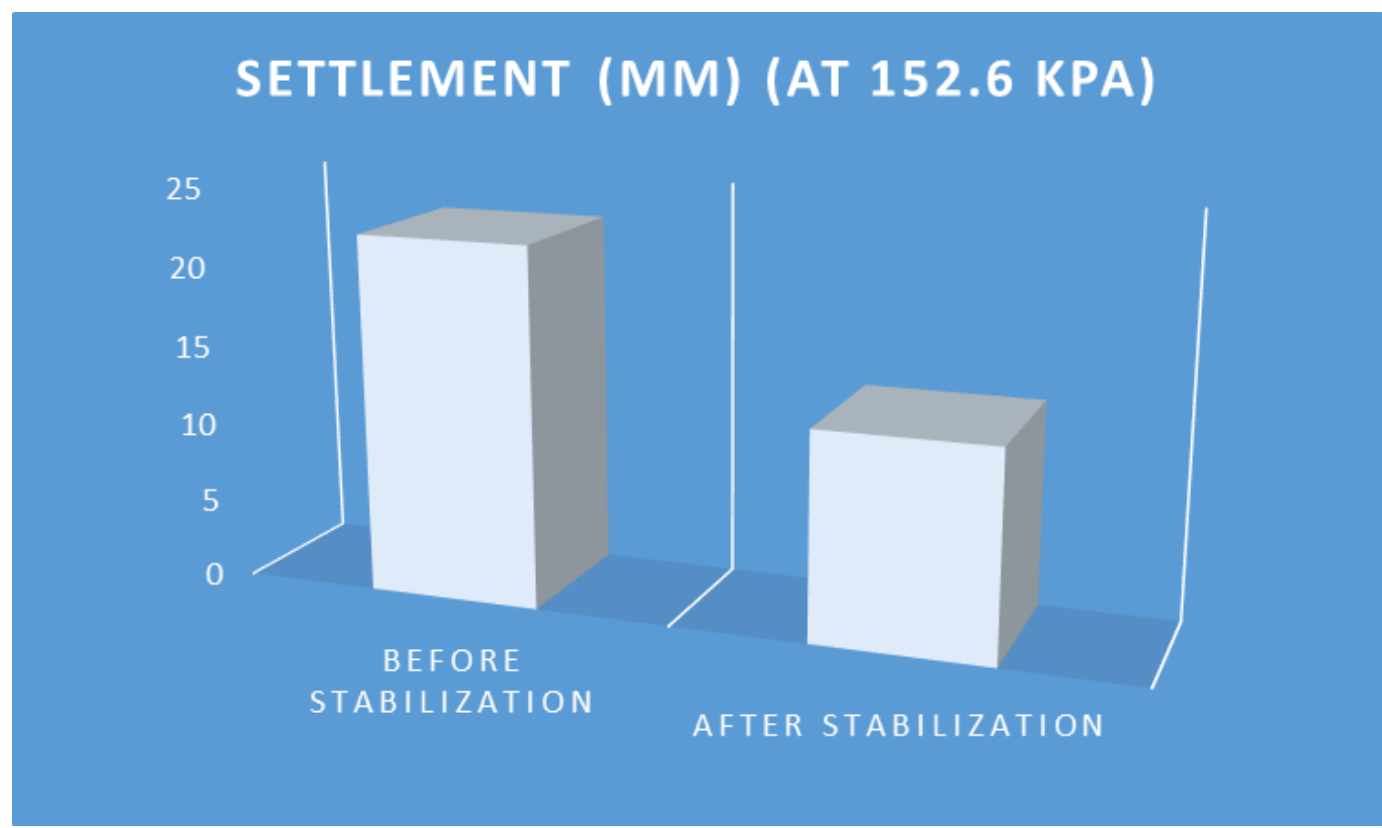


Plate Load Test Result



Test Results Comparison



Test Results Comparison