

Seestadt Aspern Objekt J8 und J9

Impulse compaction »System TERRA-MIXTM«

_ Building
site report

- _ Execution: May - June 2013
- _ Project: Seestadt Aspern lot J8 and J9
- _ Client: Neuland gemeinn. GmbH
- _ Area: 4800 running meter



Job description:

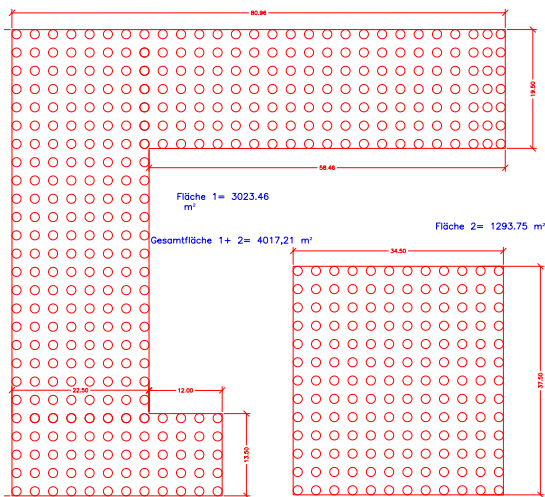
On the properties J8 and J9 several groups of buildings had been planned partly with underground parking basements, and with a total height up to 24m.

The parts of the underground parking with superstructures would be placed upon very loose to loose gravel layers, which, without any ground improvements, would not be able to take the expected strain ($\sigma_{curr} = 250 - 425 \text{ kN/m}^2$). For this reason ground improving measures were absolutely necessary in the area of the superstructured underground parking!



Solution:

The company Porr Bau GmbH decided to use the Impulse Compaction Method. Using this method the very inhomogeneous and loosely bedded gravel could be compacted down to a sufficient depth very economically and quickly! As grid dimension 3m x 3m was chosen, and in areas of higher strain ($\sigma_{curr} = 425 \text{ kN/m}^2$) also intermediate points were planned!



Results:

All areas could be made into a medium dense to dense bedding, whereby it could be proven, that even the areas between the compaction points could be optimally compacted! Due to the inhomogeneous nature of the building ground the compaction intensity (1 - 3 transitions and 15 to 50 blows per transition) was very diverse. Based upon the test records finally an optimal homogenization of the building ground could be proven and the required acceptable ground pressure could be achieved everywhere.

