



## SITE REPORT



**TERRA-MIX**

CONSTRUCTED: SEPTEMBER 2007  
PROJECT: FACHMARKTZENTRUM KOTTINGBRUNN  
OWNER: ZIEGELWAGNER BAUERRICHTUNGS GMBH.  
AREA: BÜRO KERSCH, A-2732 HÖFLEIN

## Job definition:

Next to the exit from the motorway A1 at Kottingbrunn a warehouse center selling food and building material, together with a petrol station was to be erected.

The soil investigations in the respective constructions indicate the existence of unfavourable subsoil conditions i. e. loose to medium dense silty sand and soft to stiff sandy and clayey silt. These layers of soil differ in parts significantly in respect to their thickness thereby favouring above all differential settlements. The following alternative methods of soil improvement were proposed:

- Driven mini-piles with injection grouting
- Driven in-situ concrete piles
- Impact Compaction

## Solution:

For economic reasons and technical equivalence it was decided to use the low resource system of Rapid Impact Compaction of the firm **TERRA-MIX**.

After the construction of a calibration area the exact pattern and number of inspection passes was established together with the geotechnical engineer of the project (**Büro Kersch**).



## Vibrations:

Special attention was given to vibrations during the Impact Compaction work on account of the following facts:

- Across the construction area ruins an 80 year old cast iron water pipe DN 400
- Within the construction area there exist foundations for pylons of a high voltage power line
- At a distance of 20m there exists a housing estate with glazed winter gardens.

## Result:

By using the low resource system of **Rapid Impact Compaction** one could achieve an equalisation of soil parameters and a forestalling of settlements.

The existing structures were not damaged by the vibrations and as the vibrating velocity was recorded continuously it could be proven that the allowable limits were not exceeded.



WE COMPACT SOILS .....

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