

## **Large Constructions and Bridge Abutments: Solutions with Geosynthetic Reinforced Earth**

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Large constructions built using Geosynthetic Reinforced Earth (GRE) have become ever more popular in the last ten years as an alternative to reinforced concrete constructions. The possibility of adding green facing to these constructions has particularly helped to open new areas of application.

The first major construction in Germany with a front inclination of 80°, a total height of 19,7m and a total length of 215m was built in 1997 in Iserlohn. Deformation measurement points were installed on the front of the embankment after construction had been completed and the measurements have been recorded for ten years now. In the presented paper the basics of this extremely unusual embankment and the recorded measurement results monitored over long periods of time will be presented and discussed.

Bridge abutments represent a particularly demanding technical problem because of the low levels of deformation permitted and the difficult situation in the intersection area between the construction and the adjoining filling soil. In this paper, the first bridge abutment made using Geosynthetic Reinforced Earth in Germany (2000) in Ilsenburg is also presented.

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