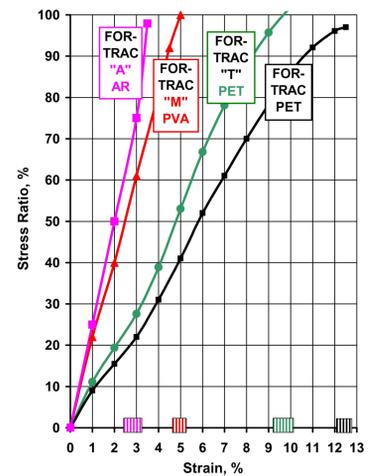
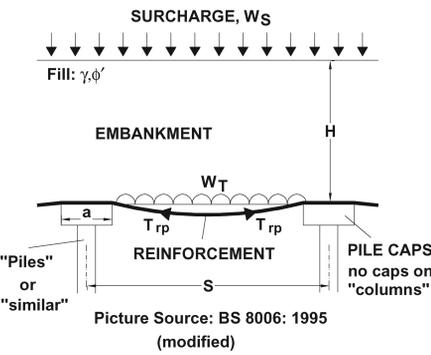


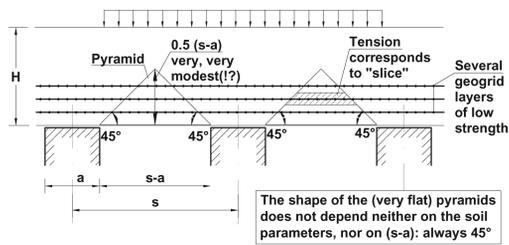
Piled Embankments: Overview of Methods and Significant Case Studies

Dr.-Ing. D. Alexiew, HUESKER Synthetic, Gescher, Germany

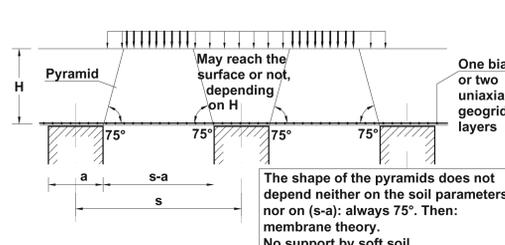
Embankments on soft subsoil supported by piles or columns of different type and high-strength horizontal reinforcement on top of them have important advantages compared to "conventional" embankment foundation directly on the soft soil. Because the loads are being transferred to a firm substratum below the soft soil layer no settlement takes place, no consolidation time is required, there is no import/export of additional embankment soil to accelerate consolidation or to compensate the settlement, practically no additional settlement occurs under traffic etc. Due to these advantages the application of such solutions is growing permanently worldwide. A short critical overview of analytical design procedures is presented pointing out their plausibility and reliability. Some selected specific projects of geogrid-reinforced system on piles or columns are shortly described and analyzed, pointing out new moments and lessons learned.



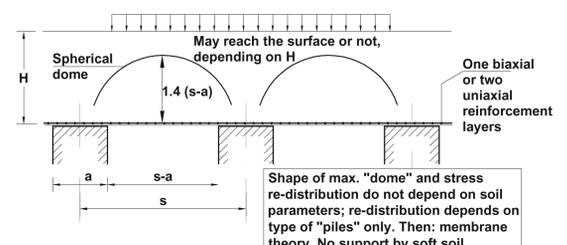
General idea of reinforced



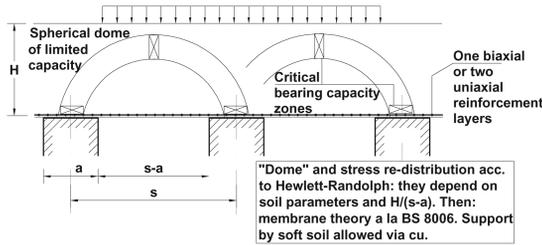
The "Guido Method"



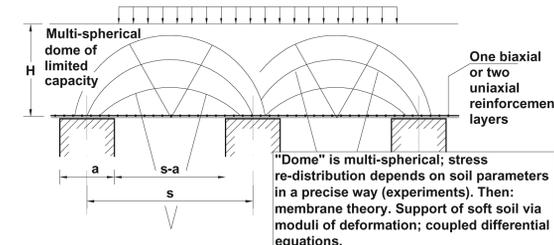
The "Swedish Method"



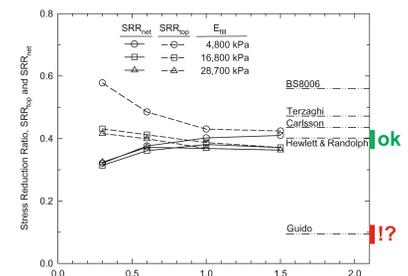
The "BS 8006 Method"



The "Older German Method"



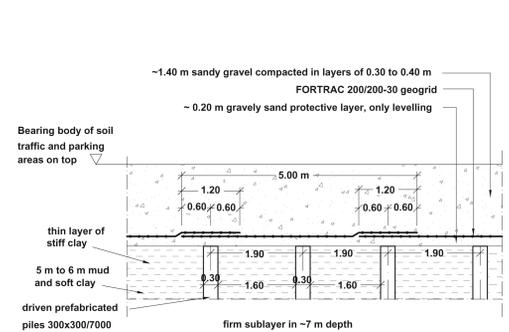
The "New German Method"



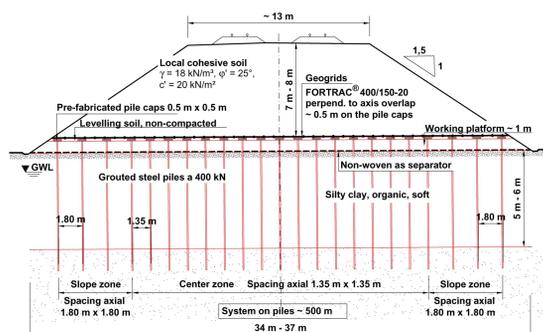
SRR_{top} and SRR_{net} versus compression index

Influence of Clay Compressibility on Geosynthetic Loads in Bridging Layers for Column-Supported Embankments,

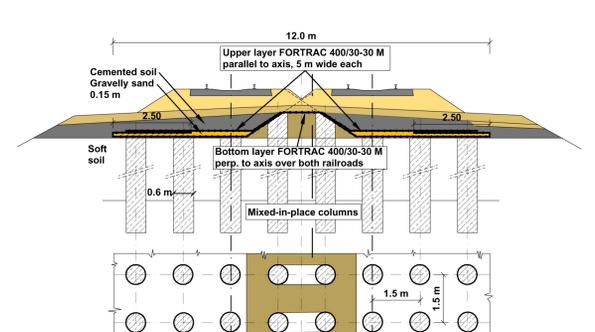
Project Gasline Station, "Shell" Bulgaria, Sofia 1998



Project Crossing River Laje at Chapadao, Ferronorte Rail, Brazil 1998



Project "Büchen", German Rail (DB), Rail Link Berlin-Hamburg, Germany 2003



Project A 63 Selby Bypass, British Highway Authority, UK 2002-2003

