



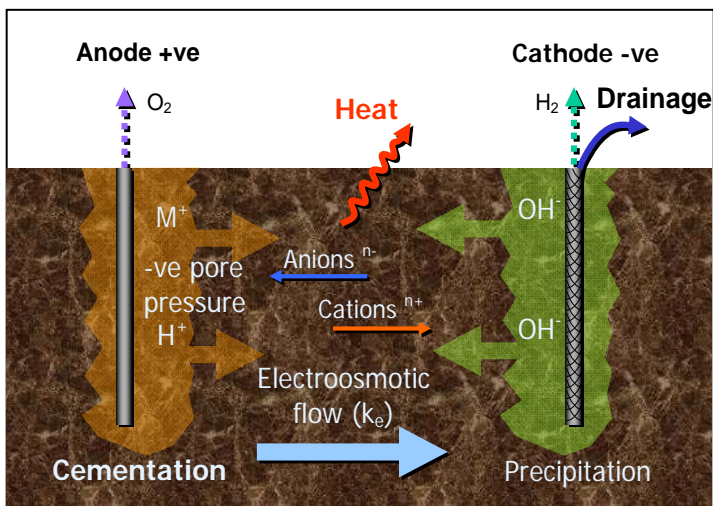
## ELECTROKINETIC STABILISATION OF SLOPES

Conventional methods for the repair of failing slopes include; the provision of additional drainage; replacing the failed material with high quality material or reinforced soil; slackening the slope by the provision of dwarf walls at the toe or the acquisition of additional land; soil nailing and structural methods such as retaining walls, shear keys or dowels.

Electrokinetic Ltd, based in Newcastle upon Tyne, has developed and patented electrokinetic geosynthetics (EKG). This technology offers a multi-functional alternative, which is not only more cost effective but also leaves a much smaller carbon footprint than current methods.

EKG slope remediation is applicable in hetero- and homogeneous soils, dominated by fine grained materials, which have failed owing to a combination of steep slopes, weak soils and poor drainage.

3. Horizontal drainage (both during active EKG treatment and long term, post treatment)
4. Physico-chemical changes in the soil, enhanced by the optional use of conditioning fluids



The treatment, based on the electro-osmotic flow of groundwater when subjected to a voltage gradient, comprises four main components:

1. Reduction in pore water pressure and subsequent consolidation of soft materials
2. Reinforcement, as EKG anodes act as a soil nails with the advantage of electrokinetic bond

Geotechnical Engineering Ltd is working alongside Electrokinetic Ltd to produce a suitable method of physically installing EKG electrodes on slopes.

We are delighted to unveil our new P45K rig.

Based on our award winning P60 slope-climbing rig, the P45K can install electrodes on slopes of up to 50° gradient. It is track mounted with a winch cable for additional anchorage. The unique side mounted mast has been designed to enable the rig to introduce both anodes and cathodes at any angle into the ground.

**ELECTROKINETIC**  
LIMITED

[www.electrokinetic.co.uk](http://www.electrokinetic.co.uk)



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Or visit our website [www.geoeng.co.uk](http://www.geoeng.co.uk)