

**Voortrekker Monument South Africa - 2004****Civil Structure**

Since the construction in 1949 this bastion of The Afrikaner, has been leaking water. The building is a concrete structure with heavy granite cladding.

After a 12 month testing phase, Sovereign submitted a remedial proposal and work commenced 2 months later. Due to the fact that hardly any plans were available, Sovereign had to investigate the construction methods and building material of that time. Hundreds of core holes were drilled, samples taken and tested. All water bearing fissures were mapped on a virtual program and fractures, voids and delaminating areas identified. This information was used to ensure that the entire building was sealed once repairs commenced.

The Monument was waterproofed by injecting a specialized emulsion into the drilled holes and all voids, cracks and water migration conduits were sealed. On completion of the project tests were conducted by simulating rain. A custom built irrigation system, delivering a metered 70 000 litres of water per shift, was constructed on the outer horizontal surfaces. No excavation took place and the project was declared a success once the appointed civil engineer completed his final inspection.