

Civil Engineering

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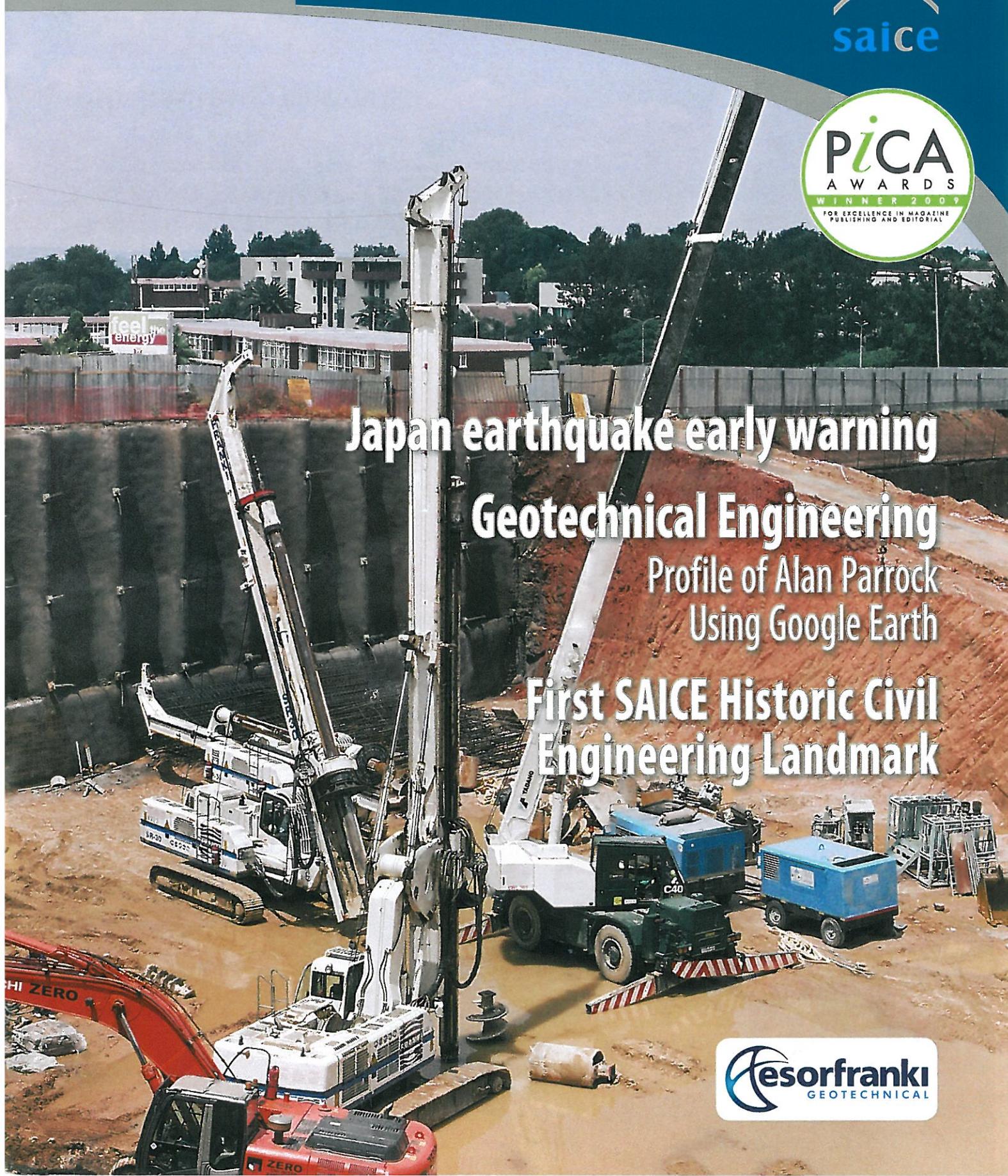


Japan earthquake early warning

Geotechnical Engineering

Profile of Alan Parrock
Using Google Earth

First SAICE Historic Civil
Engineering Landmark



esorfranki
GEOTECHNICAL

Esorfranki completes basement

ESORFRANKI GEOTECHNICAL, together with earthworks specialist Zero Unlimited as the main contractor and demolition company Wreckers Dismantling, has completed the basement excavation and structural piling at 115 West Street – the new Alexander Forbes headquarters in Sandton, Johannesburg. This massive refurbishment project is being undertaken by Nedbank Corporate Property Finance on behalf of Zenprop Property Holdings (Pty) Ltd.

The project is Zenprop's largest commercial property development in Sandton and, in both scale and environmental innovation, it is poised to become the developer's flagship South African commercial property.

115 West Street will comprise an eight-storey 36 950 m² office building with plant-filled outdoor areas, natural light and energy-efficient lighting. High-speed lifts, escalators and state-of-the-art auditoriums will feature the latest technology, and the building will boast an in-house gym, coffee bar and staff restaurant.

The building will accommodate Alexander Forbes's 2 200 Johannesburg staff members and, for the first time since 1994, most of the firm's major divisions will be in the same building. Construction has already commenced and Alexander Forbes is expected to take occupation in October 2012.

"We came on board in September 2010," says Paulo Alves, contracts manager for Esorfranki Geotechnical. "The competition was stiff, but I believe we secured this contract after submitting the most economical solution with an acceptable time frame. We have worked alongside Zero Unlimited on several projects, including 1 Protea Place and 22 Fredman Drive, and an excellent working relationship has developed between our teams."

The scope of the work allocated to Zero Unlimited, Esorfranki Geotechnical and Wreckers Dismantling on the 115 West Street project included demolition of two existing three- to four-storey structures before excavation activities could begin. This was accomplished with conventional

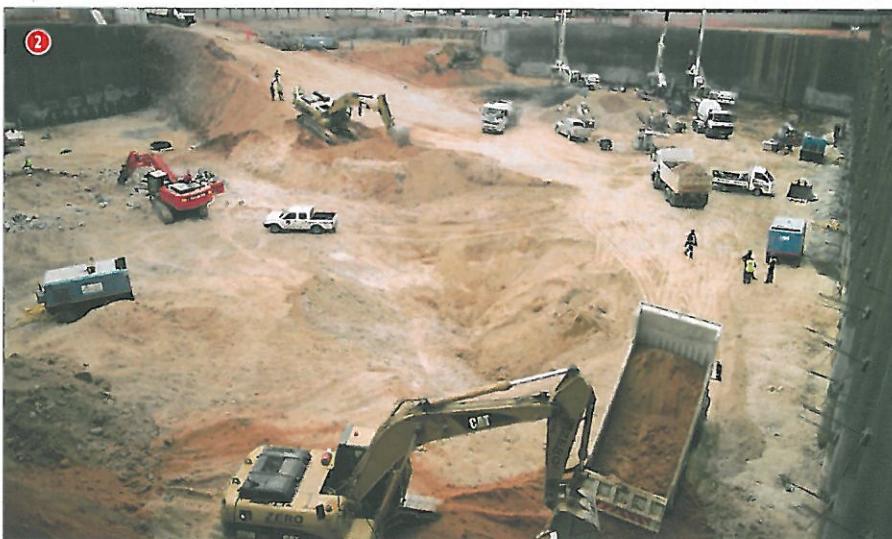
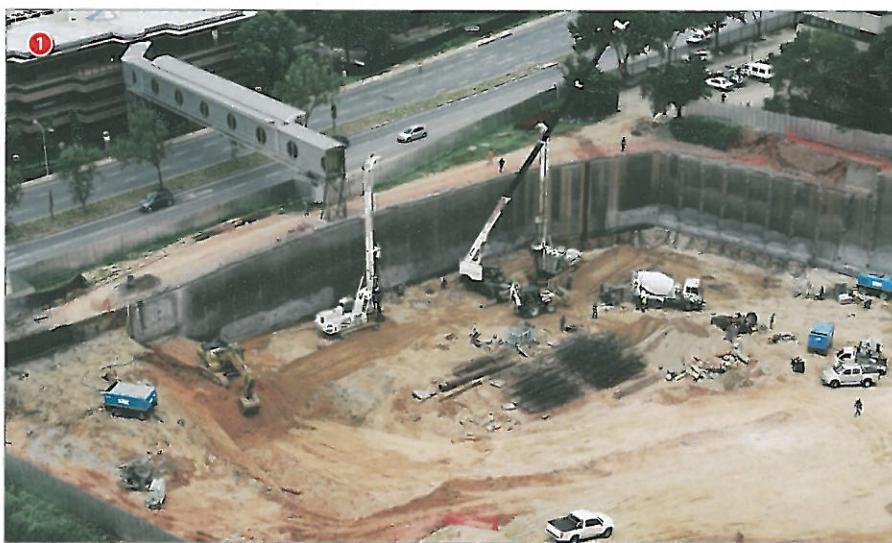
demolition methods using mechanical breakers, followed by the removal of about 5 000 m³ of rubble from the site. The lateral support installed by Esorfranki Geotechnical involved placing 87 No 600 mm diameter soldier piles to an average depth of 11,5 metres, 312 No 450 KN strand anchors, and 620 soil nails and rock bolts, varying in length from 3 to 12 metres. A total of 5 044 m² of permanent gunite was applied, followed by 269 structural piles ranging from 6 to 14 metres in depth.

"There are invariably unexpected challenges during this kind of project, and on 115 West Street rain and water were the main issues," Alves says. "Rain had a massive impact on our progress. We recorded just short of 500 mm over December 2010

and into the first week of January 2011. Once it finally stopped, we had to spend a lot of time clearing the site. Despite this delay, and to the credit of everyone on site, we still managed to complete the entire project, including the structural piling which did not form part of the original contract period, just one week late.

"Another minor delay also had an impact on our work – we had to wait for ESKOM to remove a substation located in one of the original buildings before we could begin the demolition."

Once Esorfranki Geotechnical had completed 40% of the structuring piling, Tiber Bonvec Construction and WBHO Construction moved onto the site to begin the building work.



excavation at 115 West Street

Esorfranki Geotechnical has undertaken as much as 75% of the basement excavations on Sandton construction projects. Alves concludes, "This excellent track record proves we have been recognised for our knowledge and understanding of the geology of the area. Over the years we have established and maintained successful working relationships with clients and contractors alike, with whom we have worked on an extensive number of projects in the vicinity of Sandton."

►INFO

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- ① An aerial view of 115 West Street showing the size of the project
- ② The project involved the placing of 87 No 600 mm diameter soldier piles, 312 No 450 KN strand anchors, and 620 soil nails and rock bolts, just visible on the right-hand side of the picture
- ③ Excessive rain throughout the project proved to be a major challenge

Esorfranki is one of South Africa's benchmark civil engineering and construction groups providing specialist geotechnical services, roads and earthworks, civil and pipeline construction. The group has embarked on a corporate restructuring process that will see several legal entities within its midst amalgamate into a single, centralised company with various business units. By streamlining and integrating its operations, Esorfranki will be more responsive to its markets, and the restructuring will open the door to further standardise company systems, policies and practices. A major advantage of the process will be the consolidation and strengthening of the corporate brand, since all business units will fall under one unifying name – Esorfranki. Although the business units will work under a single banner, they will retain individual accountability. Esorfranki now operates throughout South Africa, sub-Saharan Africa and the Indian Ocean Islands.

