

Case Study

Geofabrics

Project: The Greenfields Project
 Date: 2007
 Architect: Laidlaw & Laidlaw
 Contractor: GroundTech
 Location: Melbourne, Victoria



Gabion Retaining Walls

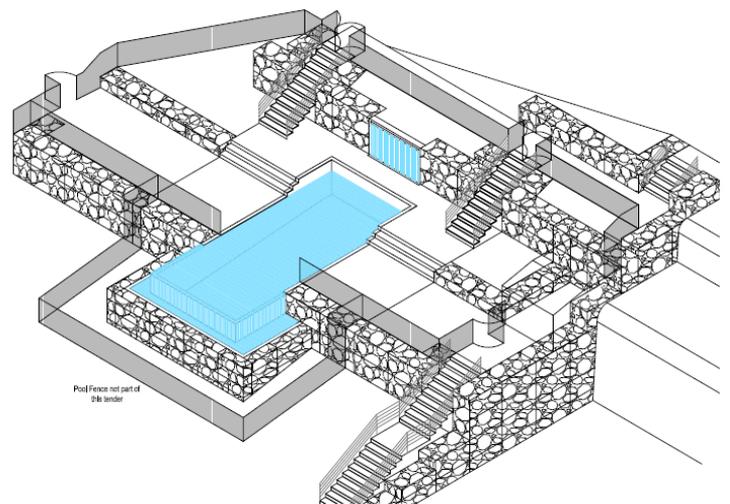
In 2006 the architect was approached to design a garden for a large property at the foothills of the Dandenong's in Victoria. A large modern home had just been completed and the client required a swimming pool and entertaining area. The site was very testing with heavy clay soils, excessive groundwater and 1:3 slopes all causing major design challenges.

The original concept was to canter lever a pool out from the slope with a negative edge and the city skyline being the focal point. The initial thoughts were to utilise masonry walls with a Wistow Stone cladding (from Mt Barker in South Australia) but 'way over budget' quotations were received, which priced the walls at somewhere in the vicinity of \$250,000.

This was unacceptable to the client and so the architect turned to the Gabion construction option initially to save money but also from a design perspective as they suited the tricky site. Geofabrics supplied Gabions are flexible, permeable and meet the design life requirement. Their woven Galmac (Zinc/Aluminium Mischmetal Alloy) wire construction and visual appearance complimented the modern architecture. The client was somewhat hesitant initially but with the saving in the region of around \$150,000 he was more than happy to proceed with the Gabion option.

As a measure to make the walls look more like traditional 'garden walls', the Wistow Stone was hand placed by Groundtech (a specialist Gabion installer), as a facia stone on exposed faces within the Gabions and then filled behind it with local rock. The finish was so impressive that additional retaining walls were constructed around the dwelling.

Geofabrics provided design suggestions for the mass gravity Gabion walls and the Gabion facades where the Gabions were 'anchored' to the reinforced concrete walls around the pool.



Isometric View Of The Gabion Walls And Façades



500mm Thick Gabion Façade Around The Swimming Pool

The architect was recently quoted; "Three years on and the walls look great. The client is very happy with the combination of plants, stone and wire; we have a great result. A good design solution that also saved the client money."

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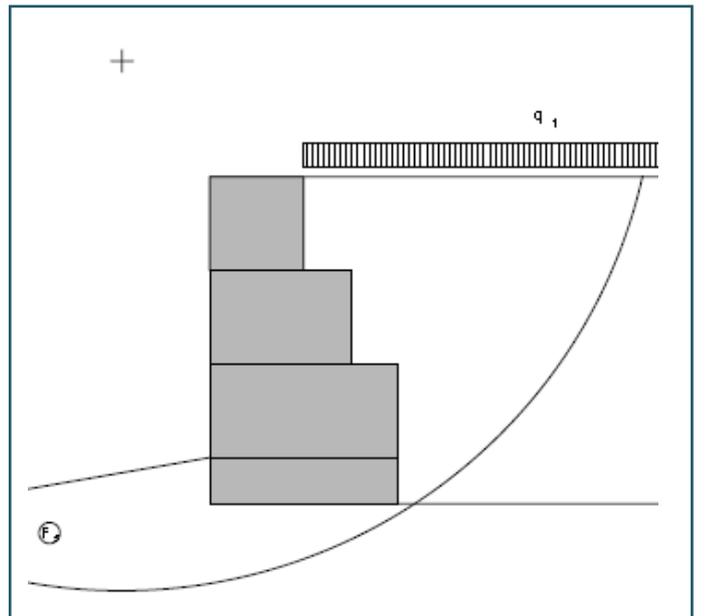
Terraced Walls With Vegetation



Stairway Within Gabion Walls



Gabion Bench



Preliminary GAWAC Stability Analysis

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10 August 2010

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