

SRK's Pretoria office turns ten

The Pretoria office of SRK Consulting celebrated its tenth year in November last year. The Pretoria office is one of 37 SRK Consulting branches in 16 countries.

SRK partner and founder of the Pretoria office, Matt Braune, reported that the Pretoria

office initially focused on stormwater management and river rehabilitation projects. Today, professional services offered have grown to include disaster risk assessments, planning for disaster management centres and compilation of disaster management plans for national government, local authorities and southern African countries, as well as water resource assessment and environmental management. These professional services were further



Moses Maliba (Ekurhuleni Metro), Matt Braune and Brian Middleton (SRK Consulting)

enhanced when the office established a GIS applications section. "We have all the specialist skills to drive these initiatives," said Braune. The Pretoria office liaises with other SRK offices regarding contracts in other parts of South Africa and beyond.

Looking forward, Braune said new strategic initiatives in the Pretoria office are asset management, relating to the creation of asset registers for local authorities concerning stormwater networks and enterprise risk management. "We will also go further into environmental compliance for both the industrial and governmental sectors. This will be expanded under the umbrella of disaster management."

Utility unveils upgraded sewage treatment plant

Johannesburg Water has unveiled its upgraded Northern Wastewater Treatment Plant.

The Northern Works is by far the biggest in the city. Rapid population growth and extreme weather put pressure on the works. This resulted in the works becoming unable to cope and, at times, led to spillages when the sheer volume of water reaching the works exceeded its ability to treat it.

Hence Johannesburg Water embarked on a project to increase the capacity of the plant. The ultimate treatment capacity of the new unit will be 150 Mℓ/day constructed in three increments of 50 Mℓ/day to pace the growth in wastewater flow to the works.

The new treatment plant includes sedimentation, flow balancing, biological nutrient removal, activated sludge treatment with supplementing chemical dosing facilities, secondary clarification, effluent disinfection and effluent outfall and site services.

On the sludge treatment side, the plant includes primary sludge fermentation with disposal of the fermented sludge to the previously refurbished digesters from Unit 2, waste activated sludge thickening in gravity thickeners. The thickened sludge is then treated in dewatering facilities under a separate project to handle the increased sludge masses from the new treatment capacity.

Foreign students find new home at SA groundwater firm

Four international interns have arrived at Cape Town earth sciences consultancy Umvoto Africa.

This brings the total of young people who have gained experience at the consultancy to 40. Undergraduate and honours students from the Cape Peninsula University of Technology, Fort Hare, Cape Town, Stellenbosch, Pretoria and Limpopo universities have come to gain experience at the firm. Masters students have travelled from as far afield as the UK, Germany and France, while students from African countries such as Madagascar and Kenya have also benefited from Umvoto's interns programme.

New intern Matt Webb (26) hails from the Lake District in the UK. He recently finished his masters

degree at Birmingham University. He is focusing on modelling work for a long-term Umvoto project for the Overstrand Municipality, where the firm discovered an excellent groundwater supply and is now testing the aquifer and monitoring systems for long-term sustainability.

Anne Rosenkranz (23) is completing her B.Sc in Geosource Management at the University of Aachen, in Germany. This is her first work experience and she is keen to get an overview of various hydrogeology specialisations before studying for her masters degree.

Vancouver-born Paula Hay (22) has completed a degree in Social Science at the University of Utrecht. She has visited South Africa on several occasions, and is assisting with an Umvoto project exploring social vulnerability linked to water issues.

Len von Scherenberg (24) is in his last year of Water Management Studies at Germany's Dresden University. He plans to do his masters thesis after the internship. He is currently working on a project in the Eastern Cape, focusing on literature research and examining geological maps to assess groundwater resources.

"The interns programme has become internationally renowned since Umvoto first accommodated students about nine years ago, says Helen Seyler, who oversees the programme. "It is a highly instructive environment as South African and foreign students learn from one another while gaining practical experience on cutting-edge projects. Our goal is to access funding, accommodation and institutional support for the students, as to date the company has supported the initiative single-handedly."



The Gansbaai Water Treatment Works was one of the Technical Excellence Winners in this year's AQUATAN-SAICE Most Outstanding Civil Engineering Project Awards. With the award are Garth Gademan of SSI, Stephen Müller and Peter Scholtz of Overstrand Municipality and Francois Gibbons of SSI.



WRC project reaches out to future scientists

Projects funded by the Water Research Commission (WRC) not only impact positively on the end-users of the research outcomes, and the scientists and post-graduate students doing the research, but also on future scientists.

So a number of high-school learners have benefited from a joint bioprospecting project between Stellenbosch University (SU) and the CSIR. Funded by the WRC, the project is aimed at obtaining anammox bacteria from different South African environments. Initiated to find a specialised group of bacteria able to oxidise ammonia to nitrogen gas, the project holds great potential for the future of wastewater treatment.

The project has already touched the lives of several prospective scientists. Grade 11 learners from selected schools around Stellenbosch, who showed the best marks in science, have been invited to visit the facilities of the Department of Microbiology at SU. Among others, the learners have been given the opportunity to obtain some first-hand experience with the basic methods used in microbiology, such as how to work with a microscope, aseptically prepare dilution series and spread plates, as well as separate DNA fragments using gel electrophoresis.

The schools involved were Kayamandi High School, Kylemore High School, Lückhoff High Senior

Secondary School, and Stellenbosch High School. In addition, bursaries ranging from R500 to R1 500 have been presented to learners with top science marks. The bursaries were sponsored by CSIR, SU and the WRC.

In other news from the project, Wendy Stone, the student involved in the project, not only passed her honours degree *cum laude*, she has also been awarded as the most outstanding honours student by the South African Society for Microbiology. According to project leaders Prof Alf Botha and Dr Jac Wilsenach, these achievements could not have been accomplished without the support of the WRC and they thanked the institution for their commitment to investing in the future of the country.

Right: Dr Jac Wilsenach of CSIR and post-graduate student Wendy Stone on the open ocean during a sampling exercise for anammox bacteria from the ocean floor off St Helena Bay.



Far right: Vusumzi Ncaphayi of Kayamandi High School receiving a bursary, sponsored by the WRC, for most outstanding learner in the field of science, from Prof Alf Botha of Stellenbosch University.



Delegates training in management of aquifers

A successful training course on risk management of aquifers has been presented at the University of the Western Cape (UWC).

The course was presented by Geohydrological and Spatial Solutions International (GEOSS) and sponsored by the FETWater programme. FETWater is jointly funded by the Flemish government, UNESCO and the Department of Water Affairs (DWA), with the Water Research Commission acting as the implementing agent.

The course was given in the form of field monitoring and the use of various items of field equipment was demonstrated by members of the DWA, UWC and GEOSS. Delegates representing UWC, DWA and various municipalities commented on the standard of excellence enjoyed in conveying a complicated topic in a simple, yet informative, manner. In addition to the course itself, an informal social event provided excellent opportunities for networking and the sharing of knowledge – one of the aims of FETWater.



Delegates attending the course on risk management of aquifers presented at the University of the Western Cape.