

# More females would consider engineering if they knew the options, says Chelsea Rebelo

The uptake of females in the engineering field would likely increase if students had more information of the career options available, Chelsea Rebelo, geologist at Rosond, says on International Women in Engineering Day.



Chelsea Rebelo. Source: supplied

"While civil engineering remains largely male-dominated, there are opportunities in sectors like geotechnical engineering," Rebelo, who has a BSc Honours in Geological Sciences from the University of Cape Town.

Her advice to students is to identify their thinking preferences and strengths. "Are you analytical or creative? Try and carve a path that enhances your strengths. Even if you embark on a few detours, always remember that experience is good, provided it is relevant and can be used as intellectual or identity capital along your journey. Research your career path properly and network with engineers on platforms like LinkedIn to find out more."

Rebelo started her career as a geologist conducting greenfields exploration activities in Zambia. A brief stint at a company specialising in undermining studies was her first insight into geotechnical drilling, followed by her latest position at Rosond.

Her role in the geotechnical department has expanded from pure geology to encompass project coordination and management. Her responsibilities range from compiling tenders to liaising with clients in order to scope their specific requirements, drawing up proposals and reporting back. "The data we collect on our geotechnical projects is not just about drilling metres as in exploration. It also encompasses other testing and analytical services we are able to offer."

## Current trend

The difference between exploration and geotechnical engineering is that the former investigates mineralogy and geology, whereas the latter aims to understand the physical behaviour of the material in question. A current trend in exploration is to obtain as much data as possible during the drilling operation itself. The idea is that we can produce a suite of information while drilling is happening in a live-time scenario. That is definitely a trend in geological exploration, allowing clients to make decisions on the fly, saving them time and money.

"In terms of the digital transformation that the company is undergoing as it embraces 4IR in its drilling technology, it has been really important to have somebody marry all of these elements and ensure everybody onsite can function effectively," Rebelo says.

As an example, she references a current project involving geotechnical drilling for design work. "Such projects send a positive message about investment levels and investor confidence, especially if the mining client is likely to establish new infrastructure as a result. The accuracy and precision demanded of the drill crew on such projects is critical in terms of the design work and the models that the engineers develop for the structures required."

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