

# The Engineer

Shaik Abdul Wahed makes the world of engineering a little less complicated and a little more humorous.

BY Jacqueline Toyad

Landslides seem to be a regular occurrence in this country, up to eight tragic incidents a year sometimes. Were they acts of God? Were they the result of shoddy construction? Could anything have been done to prevent them? How can residents of hillside developments, whether set on a slope, just nearby or at the foot of one, ever sleep soundly without the security of knowing that the land they own is safe?

Thanks to Shaik Abdul Wahed, a professional engineer for over 30 years and principal of engineering consultancy Jurutera Perunding GEA (M) Sdn Bhd, these questions have answers that are simple enough for you and me to understand and see if there's a cause for concern.

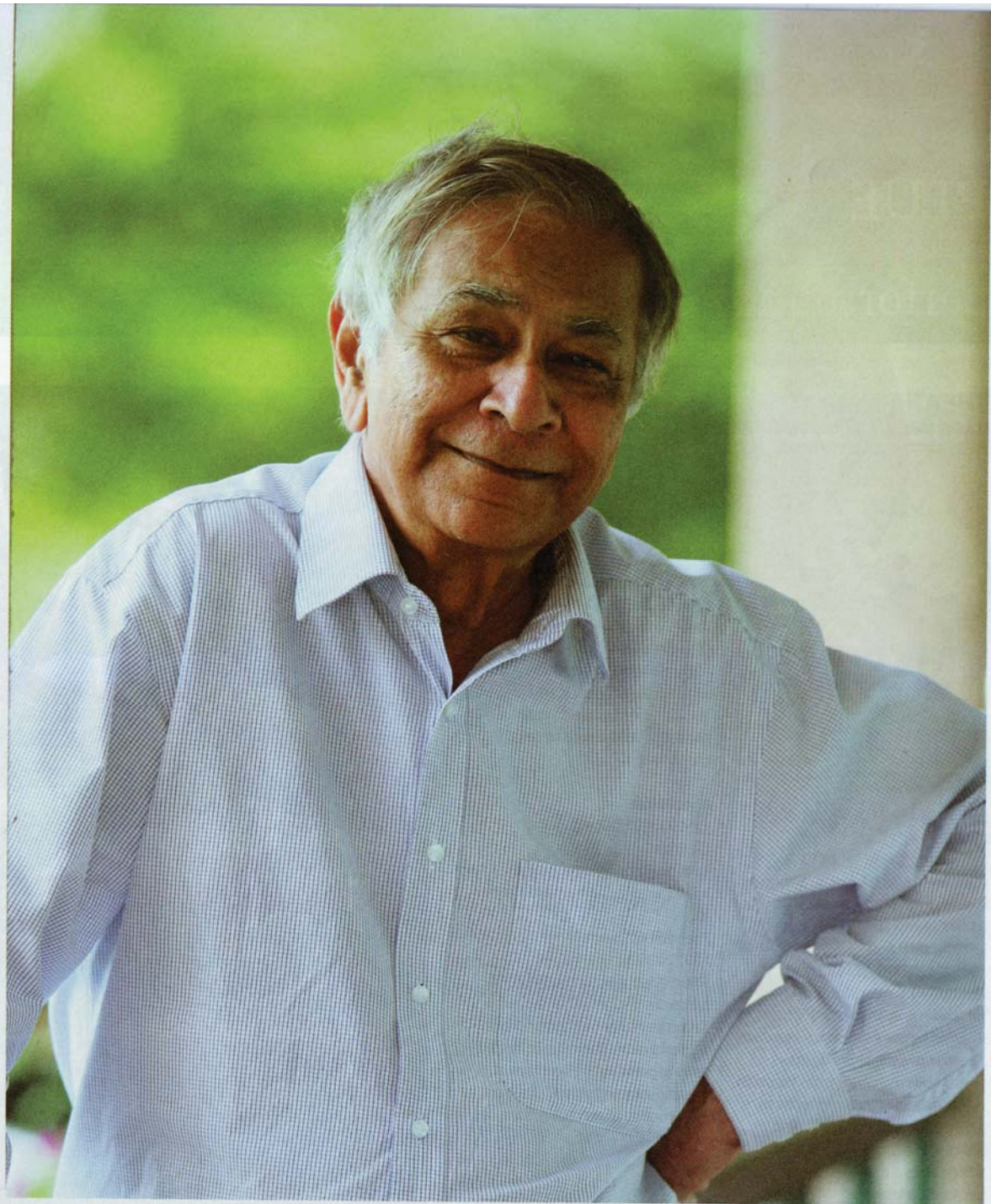
His recently launched *Slopes Made Simple* is the ideal guide to slopes, written for everyman. It discusses every aspect of slopes, from living with slopes, the risks and slope design to warning signs of slope failure, tips on problem recognition and how you as a non-engineer can do your part by

keeping your slope safe.

"Put it this way, if you can understand very simply what can cause problems and take the steps to avoid them, half of your problems are gone," says Shaik. "And when you're living on a hillside, it is real community living, in that 'you're my neighbour and what you do affects me'. We have to work together. Don't wait around for the majlis to come monitor or repair it."

For Shaik, it is arming everyone with what he calls "intelligent maintenance", to understand why certain maintenance is essential and then doing it.

How *Slopes* came about stems from some of GEA's projects that Shaik had been involved with. There was the study of some 200-plus massive slopes along the East-West Highway between Jeli in Kelantan to Grik in Perak, which included design evaluation, to overseeing the construction of these slopes. Another was a slope study for some 300km of the Tamparuli-Sandakan road. But the one that really opened Shaik's eyes to the



KENNY YAP/THE EDGE

extent of sloppy slope maintenance was when GEA was commissioned to evaluate some 215 institutions under the Ministry of Education in Selangor, Federal Territory and Pahang for slope-related problems.

"Most of these schools were affected by slopes and people had no idea about maintenance," says Shaik. "Throwing engineering theories at gardeners was not going to work, but we knew that they had to have some simple understanding of why things can go wrong so they'll know why they need to do it and then do it. We produced a small video for some of these schools explaining what happens when you don't maintain the drains, of what happens when water gets into the ground."

Water, it seems, plays a great role in causing landslides and debris flow in countries like ours where rainfall volumes are large — and Shaik has dedicated a whole section of *Slopes* to it. Just enough water in the soil helps keep soil particles together, but too much water and it increases the weight of soil mass in the slope, increasing pressure within the soil mass and thus, decreasing the cohesion between particles in the soil and weakening the slope. Too much water in the soil is often the result of poor drainage planning or badly maintained drains. In *Slopes*, Shaik includes many photographs of these, most of which were taken during GEA's evaluation of the schools.

"We found that in front of the school, everything was beautiful. At the back of the school, particularly near the kitchens, you couldn't even walk past without drying a little, because of the smell and stuff. Every bit of rubbish was being thrown into the drains. They were treating this like, throw the stuff and rain will wash it out somewhere else," says Shaik. The engineer knew that it was because not many people actually know why drains are there in the first place, needless to say why we should work hard to maintain them. So what he and his colleagues did was make a simple video presentation and an accompanying manual in Bahasa Malaysia for use in schools.

Shaik says, "One of our associates from Hong Kong saw it and thought it was good and suggested we produce it for everybody. So I worked on the book. Then when Tan Sri Jamilus Hussein (chairman of construction Industry Development Board Malaysia and CEO of KITA Consultancy Services) saw it, he said, 'No. It still looks like an engineering book. What is this with the refer to page so and so ... Do a proper layout. Everything should be on the same page.'"

Taking in all this advice, Shaik's *Slopes* looks like (in the 21-year-old's words) "a fashion magazine. Colourful diagrams and on-site pictures help to illustrate points that are easy to understand. It's about empowering the everydayman with enough knowledge to ask the right questions or to notice if something's not right."



"Remember, you have no control over construction but while construction is going on and you're buying property there, you still have a choice of saying, 'I don't want to live there,'" says Shaik.

But not all is serious in Shaik's world. In tandem with the launch of *Slopes* was the release of *The Engineer*, a compilation of cartoons by Shaik based on the world of engineering, which is often to us a boring subject. It started with a branding exercise for his then site investigation contracting company, Ground Engineering (M) Sdn Bhd (now defunct), published in a calendar that was distributed as a corporate gift. Later some of these works were published in the Institution of Engineers Malaysia's bulletin from April 1976 under the title "Shaiky's View".

Then when Shaik and two other partners went on to start GEA, these cartoons starred in the new company's yearly calendars.

The hardcover book is hilarious, especially when depicting engineering "lapses in judgement" — engineers never make mistakes.

The similarity between *Slopes* and *The Engineer* is that they are the expressions of Shaik's own concern with certain issues prevalent in engineering and the construction trade, one of which is his primary cause — site investigation.

"I am trying really hard to improve our (country's) site investigation practices. Site investigation affects every building, every road, virtually everything in our country," he shares passionately. "Your body is the same as the ground. What's going on beyond the surface is not known initially. The doctor will look at your mouth, your tongue, listen to your heartbeat, probe

a bit and then have a first assessment of what could be wrong with you, then probably take a blood test or whatever test he feels necessary to decide what is wrong with you. Even then he may not be correct. But if he does the thing properly, he will be quite close to the problem. The ground is exactly the same. You've got to do the drilling, you've got to be boring, you need to take the samples, and it has to be professionally done. This is a small number of tests, and you're going to be building multi-storey buildings on these tests and the safety of that structure depends on the results of those tests."

Since *The Engineer* is a compilation of 30 years worth of doodlings and wit by Shaik, it actually traces the evolution of the Malaysian civil engineering industry. Even someone with no knowledge of the industry and its practices can actually understand the humour and at the same time learn the different players and bodies involved in the construction world.

What's interesting to know is that Shaik, who hails from Kota Bharu, Kelantan, is completely self-taught but he's always had an interest in commercial

art. However, when he was at a career crossroads, the only choices given by his father (the person with the cheque book) were medicine and engineering. He had no interest in medicine and so did a course in engineering in Australia, coming back to Malaysia to a job as a foundation contractor, then a non-destructive tester, a quality control specialist, a site investigation specialist and finally, a consulting engineer.

Shaik still draws, and when he shows me some cartoons from his personal collection I see that his repertoire is not restricted to the engineering field. He jokes that as he's retiring soon, he might have to depend on cartooning for income and asks if *The Edge* would be interested in publishing his toons. "Once you can see the humour in one thing, you can see humour in other things," he says.

**Slopes Made Simple** is available at selected MPH bookstores at RM55 each, while **The Engineer** can only be ordered via [www.gea.com.my](http://www.gea.com.my) at RM125 a copy.

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