



## Personal and career development in engineering

### *An Engineer's role in Disaster Relief*

#### **Eddie**

Back in 1992 I was approached by an organisation called RedR, Register of Engineers for Disaster Relief, based at the Institution of Civil Engineers in London, and they asked me to go out to South Africa to help with the drought relief programme which was desperate in 1992 in North and South Africa, up on the Zimbabwe border, in an area called Venda which, in those days before the election, was a homeland for the blacks run by the blacks.

#### **I/V**

So that was the task – did you have definite objectives to fulfil?

#### **Eddie**

The objective's quite simple, that the people could be at risk of losing their lives because of the drought in that part of the world, and we were to try to find water as quickly as possible and to get the existing infrastructure working as quickly as possible.

#### **I/V**

And how did you get the job?

#### **Eddie**

I got the job by being a member of RedR and also by being a Civil Engineer, and they'd try and match your CV with the task in hand. I had done various things in parts of the world, all over Africa before then, so I'd had a lot of African experience.

#### **I/V**

So what was your role – were you part of a team or head of a team?

#### **Eddie**

I was head of a very small team dealing with the driest third of the country with the extreme north-east section.

#### **I/V**

So can you tell us what happened when you got there? How did you get stuck into the project?

#### **Eddie**

I was picked up at the airport as soon as the plane landed at ten o'clock, driven up to Venda, arrived there about seven o'clock at night, taken on site just before dusk, taken back to my so-called digs, which was being used by drilling gangers and various other people, and given a meal and told to get on and cook it, and then the next morning we started work. It was quite a rush; I was there for a month.

#### **I/V**

And when you say you started work, what did you do?

#### **Eddie**

The first thing was to find out what other people were doing and to liaise with them. There was a certain amount of trucking of water involved because a lot of the hand pumps had broken down. Also I had a volunteer from the Department of Water Affairs, a young graduate, who helped me with the social surveys, well in fact who did most of those. He went round all the villages in that area and found out which hand pumps were working and which ones

weren't, which villages were the most highly stressed for water, in fact most of them were in the red category, the most highly stressed category in that area.

**I/V**

So how long into the project did you get to a solution that you then had to work through?

**Eddie**

Well I was only there for a month but certainly by the end of the first week I'd already decided that the Venda professionals themselves should be managing their own affairs, so my top priority was to organise a seminar on hand pump maintenance for them, the professionals, back in the capital of that area.

**I/V**

Was there any learning – did you know about hand pumps already or was there any learning to do quickly?

**Eddie**

Well I knew quite a lot about hand pumps from working in other African countries but I hadn't come across that particular hand pump called the President pump which they used in South Africa.

**I/V**

Could you describe a typical day, a typical project?

**Eddie**

Well there wasn't a typical day but I'll just give you a day when I went out with John, who was my assistant, to help him with some of the social surveys and then we came across this pump which wasn't working. We decided that our mechanics who were very, very good, they'd come up all the way from Jo'burg, part of the Department of Water Affairs, they were probably the top mechanics in the country at the time and even they couldn't fix it, so I had to telephone back through to Cape Town to get the guy who invented the pump, a guy called Wally, believe it or not, to come out of retirement. He'd retired the previous week, I believe, and he then came all the way up to show my mechanics how to go about maintaining the pump. The pump itself was not what we call VLOM, Village Level Operation and Maintenance. We had to have two trucks, a massive tripod, six men to lift it in order to maintain it and repair it, so one of the key things that I started to operate with the professionals in Venda was the idea of a better pump selection that could be maintained by the villagers themselves.

**I/V**

So what was the best part of the work, what satisfied you most?

**Eddie**

I think the most satisfying part of the work was a year later, to meet one of the sociologists who helped me run one of the seminars, who said that she'd already got round to training a hundred village level primary healthcare workers through that programme, so the programme developed, rather like Topsy, and got bigger and bigger. And I believe now, in fact, that two hundred people have been trained. We're talking now, of course, about people working unpaid in their spare time.

**I/V**

And as a professional engineer what were the professional engineering skills that you used?

**Eddie**

The main thing was management, and also transferring skills learnt from similar projects that I'd come across in other parts of Africa. At that time Southern Africa was very isolated professionally because other African countries didn't talk to them, and they had very similar problems to the rest of South Africa, and it was very exciting being in on a project in the very early stages, which was a joint project between the British Government and the South African

Government, in helping to break down this idea of being isolated, not only economically but also technically and ideas-wise from the rest of the world.

**I/V**

And what surprised you about it, the job, anything?

**Eddie**

The main surprise was the people who were almost dying through lack of water weren't dying because of the drought in Southern Africa, which is pretty horrific because all the cattle were dying; it wasn't that, it was simply through bad management that they could have been at risk of dying.

**I/V**

And did you succeed, do you think?

**Eddie**

We hope so, who knows whether or not we actually saved lives, who knows whether if I'd actually gone there lives might have been saved through me, I don't know, I can't actually answer that question. All I can say is that other programmes have spun off from that programme, such as the primary healthcare work, which is just as important in the long term, so the disaster situation triggered off a development situation.