

2012 WISE awards speech

Thursday 29 November 2012

I am a Civil engineer and really proud to be so. Civil Engineering deals with the design, construction and maintenance of the infrastructure that supports our daily life – buildings, transport routes, water, waste and energy.

And I work for Amey, one of the UK market leaders in the provision of infrastructure services. I am technical director of Amey's geotechnical engineering group.

In my teens, I had quite a liberal education with few boundaries. There wasn't anything I couldn't do if I wanted to. So when I was thinking about careers and was told by one young man "You can't be a Civil Engineer – girls can't do that" – I thought – Of course I can – and I did, in spite of the very low percentage of females then and much to the bewilderment of my parents. They asked if I would be working in an oily boiler suit.

From the start of my career I was a bright young thing, picked out as a rising star because I was an independent thinker. As my career developed, I was invited to be involved with the Institution of Civil Engineers WM committee, progressing to Chairman. This was at a time when the Institution decided to be much more outward looking and focus on external influence. I helped with knocking on the doors of regional decision makers and found they opened easily. Regional leaders were ready to listen and engage in the debate on the importance of investment in sustainable infrastructure. Now, the value of infrastructure investment for economic growth is one of the topics of the moment, with civil engineers giving expert advice at the highest levels in government, but just 10 years ago it really wasn't like that. I sat in quite a few debates and consultations with business leaders, lawyers, planners and the like, where engineers, if acknowledged at all, were disparagingly referred to as the "nuts and bolts" people. Now, I feel we have a much more positive profile.

In February this year, HRH the Prince of Wales gave the ICE Sustainability lecture and commented that:

If there is one profession that has awoken to the need for more sustainable approaches, it is civil engineering. The innate ingenuity and inventive capacity of British Engineering – is second to none.

But in others ways I wonder how far we have come. As my career progressed I gained more experienced and I got older and I was no longer a bright young thing. And at that crucial glass ceiling stage with a former employer, my independent thinking was viewed as a liability. I didn't fit the mould. I was "not like US". But for all the times that I silently wept with exasperation into my coffee, there have been many more moments of achievement and gratification.

I am currently involved in a pilot project for the Highways Agency using electro-osmosis to stabilise landslides affecting the M5 motorway. This involves drilling electrodes into a failing slope and literally electrifying it. This causes water to be expelled and the soil to be strengthened. It is alchemy in-situ which delivers significant savings in terms of cost and carbon footprint. It is very exciting to be involved with because innovation is challenging to implement.

But above all, the greatest source of quiet satisfaction in my work is seeing those I have coached and mentored progress and succeed.

Since joining Amey, I have been involved in Amey's apprentice programme. It's great working with these young people, as we are looking for enthusiasm and that certain spark of potential. **More than 600 school leavers have been recruited in the past 3 years**, including the professional apprentices that I mentor. Amey encourages all of our apprentices to enrol on the Duke of Edinburgh Gold Award scheme which helps fulfil their personal development and overall confidence, which I think is essential in cultivating employees of the future.

And we really need this big and diverse talent pool to develop the engineers and technicians who can respond to the rapidly changing demands of our society. We need to deliver much more sustainable infrastructure solutions. We need different. We don't need people content to fit the mould. We need people to *break* the mould. We need the balance, resilience and strength that diversity brings.

And having diverse role models is an important part of that. So women who are prepared to put themselves forward as role models are needed. And that may involve getting over that self-doubt related to perceptions of being self-seeking. I am not more special than anyone else, that's why I'm here. When young women are thinking about engineering, asking – Do I want to do that? Can I even do that? By example, we are saying – Yes, you can.

Christina Jackson, Technical Director, Amey