

# Profile



**Anne Fuller** has been an Institution chief examiner, has designed challenging buildings all over the UK, and is now director of Capita's civil and structural engineering division in the North. She discusses her career with Jackie Whitelaw and wonders whether talking to girls at school is really all we have in our armoury in the battle to increase diversity in the profession.

**Who remembers this question** from the Institution's Chartered Membership Examination in 2008?

To paraphrase: A tank is required in a wildlife centre to accommodate crocodiles. Three islands are required in the tank on which the crocodiles may roam. Prepare a design appraisal etc.

"How likely is that commission going to be?" the author of the question, Anne Fuller, was asked at the time she wrote it. Fuller, who became a chief examiner for the Institution in 2004, was then a regular at setting questions. Although she agreed that it was an unlikely thing to find yourself doing as a structural engineer, the question was deliberately chosen as something unexpected with which to challenge people.

How apposite was it then that several years later Fuller was herself designing a crocodile tank (Figure 1) and islands as part of a £30M project for Chester Zoo? It turned out to be one of her favourite schemes from her entire 33-year career so far – and, yes, it was challenging!

At the time, Fuller was working with AECOM managing the building engineering team in the north of England. But Chester proved to be her last job with the firm and, after over 30 years with the company, she left in 2014 to join Capita as its director of civil and structural engineering for the Midlands and the North.

She is now engaged in an equally fascinating project – the Defence and National Rehabilitation Centre for charity BS Stanford at Stanford Hall in the Midlands. The facility is being designed to house the latest technology and specialist rehabilitation services for injured servicemen and women and involves 18 new buildings, along with refurbishment of the Grade II listed hall, which houses its own Art Deco theatre.

"It is very close to my heart," she says. "The nature of what we are doing and the people we are doing it for requires that we do our very best work." It was also one of the first projects that Fuller bid for and won, with contractor Interserve, in her new Capita role.

Stanford Hall has been a catalyst for expanding her team. "We've doubled in numbers to 40 – 35 at the office in Cheadle Hulme in Manchester and five at a new office in Redditch. It's very satisfying," she says, "and there is much more to come."

## Rising to the challenge

After spending three happy decades with one employer, Fuller, now 54, surprised herself when she decided to jump ship for a new firm. "I assumed I'd never leave. I was approached, which is always flattering, but my first response was no – and then I thought, it's time!"

It was an even bigger decision given she was in the middle of the Chester Zoo project, but she left the work on the islands scheme, with its biodome and treetop walkways for visitors, in capable hands and has since returned to see the finished project. "It was fantastic to work on," she says, "not least because you had to understand the animals in order



to be able to design accommodation for them. There are macaque monkeys and orangutans in the biodome so everything has to be tamperproof and you have to consider how far they can reach!

"The islands, each housing animals you would find on different Southeast Asian islands, are joined by a river complete with crocodiles and an underwater viewing area. "The crocodiles stretched my structural engineering skills and I'd never built a river before; or a tiger enclosure for that matter."

Capita was a big attraction because it was a chance for her to lead and grow a small team into a big business and it took her out of her comfort zone of largely public sector work, particularly in university laboratories, healthcare and education, and full on into the world of commercial property.

Fuller is from the North West and loves Manchester, so an extra attraction for joining Capita came from knowing that the firm was a serious player in transforming the city and she would be playing a part in that. "It wasn't until I was approached that I realised the full extent of the work Capita had been doing, that effectively it could claim to be Manchester's engineer."

The property and infrastructure arm of the firm has worked on several of the 20 new buildings that make up the £1.5bn Spinningfields business, retail and residential development, the BBC MediaCity at Salford Quays, the Etihad Bridge for Manchester City Football Club (her team), Manchester Metropolitan University's Birley Fields development, and the refurbishment of the historic pavilion and design of a new conference venue (Figure 2) at Lancashire County Cricket Club, among many others.

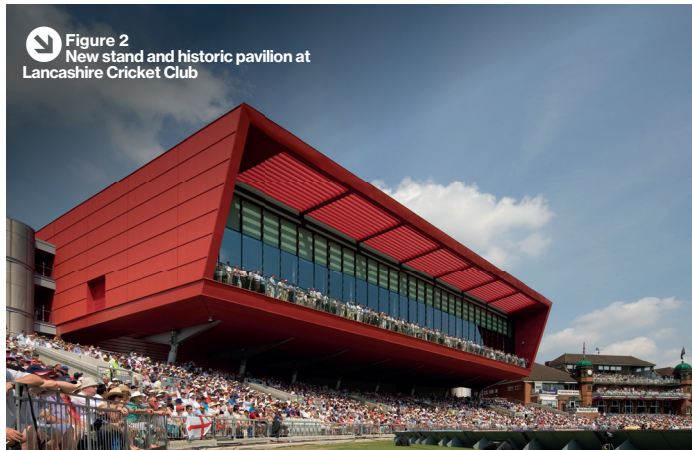
## An accidental engineer

Fuller has worked in Manchester for almost all of her career, apart from a year in the Oscar Faber (now AECOM) St Albans office after she

graduated from Leeds University in civil engineering in 1982. She also spent 18 months on site with a contractor at Heysham 2 nuclear power station as part of her professional education.

She admits she fell onto the Leeds course. “I’d studied maths, physics and chemistry at school but I didn’t want to focus totally on any of those. Civil engineering was a good bet. I know I didn’t think it through enough and I’d advise my own children to think a lot more. It was by complete good fortune that it was the right thing for me.

“I did always intend to go down the structural engineering route though – Leeds covered both, but I knew what I wanted to focus on.”



**Figure 2**  
New stand and historic pavilion at  
Lancashire Cricket Club

It was the late 1970s when Fuller started studying and if engineering is still not the norm as a choice of career for women nowadays it was even rarer back then. As with most women from the era, Fuller is uneasy talking about being a female engineer. “On the one hand I am happy to talk about women in engineering – it needs to be talked about. But I also feel uncomfortable – I’ve always been in a minority but never felt I was one,” she says. “I’ve just gone on and done it.”

At university her sex was never an issue. “Leeds had a reputation for attracting more women, but even so, out of a course of 150, there were just 10 of us. But it didn’t matter at all.”

Throughout her career the only blatant sexism encountered was when she was on site with the contractor. “That was from the senior people. They told me they didn’t want me there because I was a woman. That was a bit of a shock, to pitch up on your first day, at 22, and be told ‘we don’t want you’. I’m sure those types of people have all gone from the industry now, but it was a shame because being on the site was a great experience.

“I stuck it out though and it toughened me up. And it confirmed to me that I loved engineering whatever the challenges.”

### An industry for all

What are her views on women in engineering now? “I appreciate that work is needed to increase the numbers,” she says. “But I feel resentful that we have to do that by singling women out. We need to get to a point when being a woman in engineering is not special.”

She is unimpressed that the main weapon in the industry’s armoury is still to focus on going into schools to talk to girls about careers in construction.

“I agree it is valuable – I do it myself – but I can’t help thinking, is this the best we can come up with? Instead of trying to change the views of women so that they are prepared to consider a career in construction, shouldn’t we be trying to change construction to make it an industry women want to enter and, just as importantly given the poor retention rates, to stay in?”

**Figure 1**  
Crocodile viewing area at Chester Zoo



**Figure 3**  
Alan Turing Building, Manchester University

“Equally, the assumption that women want something completely different from a career than men is unfounded.

“Everyone wants more flexible working and sensible working hours, the right to a safe working environment, decent pay, improved job security, and a clear career progression. We need to change construction to be a better place for everyone; when that happens it will automatically be a place for women to want to work.”

### Embracing confrontation

Fuller says she has been fortunate in her own career. “I was very happy at AECOM, otherwise I wouldn’t have stayed. I was always progressing, and always working on interesting projects, such as designing the Alan Turing Building (Figure 3) at Manchester University for astronomy, maths, physics and photon science, where vibration issues were key; and Manchester Interdisciplinary Biocentre (now Manchester Institute of Biotechnology), also at the university, where I had to get to grips with the various needs of the research to be undertaken in the building.”

Now her focus – and pleasure – is on developing her team at Capita and continuing to design and deliver projects. If there is a downside, it is all the HR paperwork – “it’s very time-consuming and I am sure it can’t be cost-effective to have me doing it.”

Her management style, she says, is inclusive rather than dictatorial. She has never been put off her stride by the confrontation that is a natural part of the construction business – that Heysham 2 experience has stood her in good stead. “Everyone is under pressure, budgets are tight, so confrontation is inevitable. My advice is to say your piece, hold your ground and keep it to the meeting room. The rule is to make sure you can still be friendly with the team outside of that room.”