

CASE STUDY: Roma Agrawal, Structural Engineer, Associate Director, AECOM

I joined AECOM about 5 months ago and am working in the structures team in London. I have been involved in a variety of projects during my 12 year career from footbridges to sculptures and apartment blocks to skyscrapers, including The Shard.



1. What first attracted you to working in the construction industry? How did you find out about structural engineering and what qualifications did you require?

I loved physics and maths and wanted a career where I could use my technical skills to make real things. During a work experience placement at university with mechanical engineers, I realised that engineering was the career for me, and I did a masters in structural engineering after completing my undergraduate degree in physics. I chose to specialise in structures because I had a childhood fascination with skyscrapers so it seemed like a great fit.

2. Tell us about your current role(s). What does a typical day look like? What do you like and dislike about the role?

My work days are a mixture of having meetings with other engineers and designers, speaking to different departments around my company and working with my team on projects and also bids for new work. I love interacting with people of different backgrounds and only realised how people-focused engineering is when I began work, and also love the satisfaction of completing a project and saying 'I did that!'. Aspects I find challenging would be getting approvals from multiple authorities that all want different things from a project.

3. What qualities are required to do your role?

Technical skills are important but it is also vital you can work well with people. Engineering and construction are about creating things for people, and any structure requires the input of 1000s in order to become reality. I also think being good at drawing is helpful, so you can communicate quickly and effectively with the team!

4. What are your future career aspirations?

I aim to be influential in the construction industry in some way, as a leader of an organisation for example. I also aim to increase my external engagement – I would love to present more documentaries about our profession, and have just completed my first book, so who knows, maybe another one in the future!

5. Have you encountered any obstacles in your career because of your gender?

My gender means that I am in a small minority in construction (and add to that I'm also from an ethnic minority). This means that most of the rooms I walk into – for meetings for examples – are dominated by people who are different than me, and this can sometimes affect my confidence. I've often had assumptions made that I am junior to my male colleagues (when in actual fact I manage them), that I'm not an engineer but a personal assistant there to take notes, or that I'm somehow scared of construction sites because I'm a woman. It's up to me to dispel these stereotypes and assert my knowledge so I gain the respect of my peers. If our industry was more representative of our population, I wouldn't have to take these extra steps just to arrive at everyone else's level playing field.

Overall I don't believe that my gender has held me back in any way, and in fact often it has been an advantage for me, I've taken the opportunity to be a voice of our industry, leading to presenting documentaries, speaking to thousands, and writing a book.

6. In the time you have worked in construction, do you think the industry has improved its attitude towards women?

Yes it has. I remember a decade ago that I was still faced with pictures of naked women on construction sites, but I haven't seen any of those in a while. We are still a long way from equality in representation but I am encouraged by the progress we've made, albeit slowly.

7. Why do you think women remain underrepresented in the industry?

There are multiple points throughout a girl's life – right from birth through to their careers – where society gives us the message that engineering and construction are not for us. From construction and science toys being labelled 'for boys' in toy shops, to the most successful leaders in our industry working long-hours (very often with the support of partners at home looking after their children), the system is not set up for us. There is also a fundamental lack of awareness and understanding of what it is engineers do. Most women I know in the industry had a family member that encouraged them to consider construction; but what about those that don't know anyone in our profession?

8. Would you recommend that young women seek out careers in construction? What advice would you give them?

Absolutely, it is such a creative and rewarding industry to be a part of. My advice is to do your own research and ignore the stereotypes that exist – come in, excel, and shatter those preconceived ideas.

9. How does a diverse workforce benefit the industry as a whole?

We are creating a habitat for people, and I don't believe we can do that well unless our workforce is representative of the population. I also think the best ideas come from groups of people with different experiences and backgrounds – Diversity breeds innovation.

10. What should the industry and wider society be doing to encourage more women to work in construction?

We need to equalise the base – stop saying that certain professions are suitable only to a certain gender. We must inspire girls by showing them how construction makes our cities and towns better places and be clear about how they can contribute to their surroundings. Children should be able to study science and engineering subjects for longer (and not make subject choices so young) and companies need to support people of different backgrounds once they enter the workforce.

11. Do you think the industry can get to a point where there are as many women as there are men?

Yes I believe this is possible but not without the resolve of industry, education and government.