

## Rachel Long CEng MIMMM

*"I believe that all engineers and technicians should have the opportunity to become professionally registered"*

**Education and qualifications:** 2:1 BSc Earth Science (Hons), HND Business Administration

**Which Institution are you a member of?** Institute of Materials Minerals and Mining (IOM3), the Geological Society

**Current job title:** Geotechnical Engineer

**Company:** BAM Ritchies

**Length in current job:** Ten years

**Approximately how many staff are employed by your company?** 420 (BAM Ritchies) 3,500 (BAM Nuttall)

**Where are you based?** Glasgow

### Please describe your current role:

I am currently a Geotechnical Engineer working in the estimating department at BAM Ritchies where I price and tender new works. The geotechnical department looks at stabilising the ground prior to construction and I am part of a team of three people who procure work for this side of the business in the north of England and Scotland. As part of my role I am required to carry out tender designs for bored piles and ground anchors, which support structures, as well as prepare quality submissions for tender. I am also responsible for the promotion and implementation of the Building Information Modelling (BIM) system we use.

### Please provide a brief outline of your career so far:

I started my career prior to graduation with a summer placement at Raeburn Drilling where I learned the basics of ground investigation. Upon graduation from the University of Glasgow with a 2:1 BSc (Hons) in Earth Science I joined BAM Ritchies in 2006. Working in the ground investigation department, which determines the ground conditions for projects highlighting any potential difficulties, I was responsible for a wide range of projects on rail, road schemes, private and commercial developments. I used several different techniques to investigate ground conditions, including rotary drilling, digging trial pits and sonic boring. I was responsible for compiling the reports for these contracts to bring together all the information for the client.

In 2008 I moved into the geotechnical department. I have been involved in a number of projects for roads, tunnels and dams, working for various customers including utility companies, local government and the MOD.

## CASE STUDY



I have worked with several different disciplines, including slope stabilisation, ground anchors and spray concrete, as well as drilling and blasting.

### Have you worked on any unusual or high profile projects?

I was involved in the slope stabilisation works on the A83 in Argyle, Scotland, around the stretch of road known as the Rest and Be Thankful. The road is prone to landslides and the BAM Ritchies were employed after several debris flows from the hillside above the road resulted in road closures and considerable delays. We installed two barriers. I was site agent for the project which saw the installation of a shallow landslide barrier, specifically designed for the hillside, and an in-channel VX barrier. These were the first debris flow barriers of their kind to be installed in the UK.

I also spent 18 months carrying out recovery works on the Glendoe Hydro Scheme following major damage to the power tunnel in August 2009. The recovery works included construction of an access tunnel in order to clear the collapsed material from the main power tunnel. We also constructed a tunnel to bypass the collapsed section of the power tunnel. Both tunnels were constructed using drill and blast techniques. I was part of the bypass tunnel team and responsible for supervising the tunnel works.

## CASE STUDY

### What spurred you to become registered as a CEng?

Becoming a Chartered Engineer has always been a career goal. I believe it is important that technical ability is recognised with the right qualifications. Academic learning provides a foundation of knowledge for graduates but practical, on site experience leads to the development of well-rounded and competent engineers. This is what you need to be to pass your assessment to become a CEng.

### How did you become registered as a CEng?

With an Earth Science degree working in the construction industry, specifically ground engineering, it has often been difficult in the past to gain recognition. People in my industry usually have a Civil Engineering background. My degree was not accredited by the Engineering Council, which meant I had to demonstrate the underpinning knowledge and understanding in other ways. The Institute of Materials Minerals and Mining (IOM3) supported me in becoming professionally registered based on my experience and ability. I was asked to submit a technical report on the suitability, design and constructability of flexible barrier systems to control rockfalls and landslides. I found the process straightforward and the interview was far less scary than I had expected it to be. Both interviewers made me feel comfortable and at ease, which allowed me to talk freely about my experience. Overall, I found the process very rewarding. Achieving CEng has made me realise I do have the ability, knowledge and experience to compete with my peers.

### How has professional registration as a CEng benefitted your career?

Having Chartered Engineer status shows I have attained a level of competence that is recognised throughout the industry. It will help me to stand out from the crowd and be recognised by my peers. Being a Chartered Engineer is a common requirement for clients for senior positions on projects so being a CEng makes me more sought-after.

### What advice would you give someone considering professional registration as a CEng?

I believe that all engineers and technicians should have the opportunity to become professionally registered. Being registered as an EngTech, IEng or CEng will not only benefit the individual, but also their employer and the industry as a whole.

Even if you think it is too early or you feel you may not be up to standard, speak to your institution, in my case the IOM3, and find out the requirements. They are all very helpful. My advice to anyone considering registration is to apply and show your competence.

### What is your employer's attitude, were they supportive while you were working towards professional registration as a CEng?

My company has been very supportive of my application process and has helped me along the journey towards professional registration.

### How does your company / clients benefit from you being professionally registered as a CEng?

Being a CEng demonstrates my competence and knowledge as an engineer so my employer can have confidence in my ability. It is also beneficial when tendering for work to have Chartered Engineers within the company as this is often a requirement of customers.

### What are your future career goals?

I aim to progress to senior engineer status. I will also continue to support and encourage my team to develop their skills and provide assistance to others as a Delegated Engineer within our accredited training scheme.

### What was your reaction to receiving the 2016 IOM3 Technician Medal?

I was surprised to hear I had won the Institute's Technician Medal as I did not know I had been nominated for such a prestigious award. I felt proud and honoured to be recognised by my peers and was delighted to receive the award at the Institute's headquarters in London.

Rachel Long CEng MIMMM

Registered: April 2016

