

Breaking Ground: Alice Patterson – Pioneering the Future of Power Earthing

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The 24-year-old electrical designer challenging industry norms and inspiring the next generation

In a field dominated by men, Alice stands out. At just 24 years old, she's believed to be the youngest female power earthing designer in the UK—a distinction that comes with both challenges and opportunities in an industry that's critical to our infrastructure's safety yet remains largely invisible to the public.

"Everyone always asks 'what do you do, Alice?' I explain, but they're still none the wiser," she laughs.

For those unfamiliar with the term, power earthing is the process of connecting electrical systems to the ground through a network of underground conductors—a critical safety measure that prevents potentially fatal electric shocks, fires, and equipment damage.

From Sound Engineering to Life-Saving Infrastructure

Alice's journey to becoming a design engineer at [PTSG](#) wasn't a straight path. After studying sound and lighting engineering at university, she initially thought her career would lead to theatres and festivals. But after traveling through Australia and Southeast Asia for eight months, she returned home ready for change.

It was during her job search that Alice received advice that would change the trajectory of her career. Her partner told her: "Don't get complacent."

"It really stuck with me," Alice reflects. "I saw this job come up, and I thought, 'I'm never going to get that. It just sounds so complex.' But she kept saying, 'Just apply, you never know, just push yourself.'"

That push led to an interview with PTSG, and to Alice's surprise, she got the job. Starting as an assistant design engineer two and a half years ago, she's since been promoted to design engineer and has worked on projects that many would envy—from Wimbledon to the V&A Museum, and even a massive wave garden built in a quarry.

The Power of Mentorship

When reflecting on her success, Alice is quick to credit her managers, Jason and Jacob: "One thing I'm grateful for is having such a supportive and motivating team" she says. "They always help me out with anything I need. They're incredibly supportive and always want me to strive and do better."

This mentorship has been crucial to her development. "I can see they really want me to succeed," Alice explains. "I couldn't ask for better managers – they're just great."

Growth Through Challenge

The responsibility of the role hit Alice early in her career when she designed an earthing system for a primary school.

"That was quite overwhelming at first," she admits. "It's literally like saving lives. It is a life-critical thing that we have to design."

But rather than being deterred by this pressure, Alice embraced it. "Growth often comes from pushing past fear," she says. "I was apprehensive when I applied for this job and even just working with new people who I thought would be so much smarter than me. That was scary, and I've done it. I'm here now, and it's the best decision I've ever made, 100%."

Breaking Barriers in a Male-Dominated Field

When Alice arrives on-site to conduct soil resistivity tests—a crucial part of her role that involves walking several kilometres while taking measurements—she often encounters surprise from male colleagues.

"They're often quite shocked," she says. "It used to worry me at first and I would sometimes get anxious going to sites because I'd think, 'what if they're not nice to me?' But I've learned that generally people are actually really nice."

A Career Without Borders

Now approaching her third year with PTSG, Alice sees a future full of possibilities in power earthing. "I've never once thought about doing anything else now," she says confidently.

With so few women in power earthing—when Alice joined, there were only about 50 power earthing design engineers in the whole UK—she hopes to serve as a role model for others considering the field.

"If there's any other females that would want to do what I'm doing, hopefully I can be someone they can look up to. Even just women going into electrical engineering, or engineering in general... hopefully I can be a role model and mentor to other people."

Alice's passion for her work is infectious. "I love my job," she says simply. "I've always wanted to have a

job that I enjoy—everyone does, don't they? I feel really happy about that."

The View from the Quarry

Perhaps the most striking aspect of Alice's career is the unique perspective it gives her—both literally and figuratively. From standing at the edge of massive quarries to walking along runways at Luton Airport as private jets take off nearby, her role has taken her to places most people never see.

"There's many times where I've been doing a soil resistivity test right next to the lakes in Scotland," she says, sharing photos of stunning landscapes from her work travels. "I always take pictures and send them to my mum and dad and say, 'I'm here today.'"

It's these moments that remind Alice of how far pushing past her initial fears has taken her. And with her combination of technical skill, enthusiasm, and determination to challenge herself, the view ahead looks just as promising.

Alice is a design engineer with PTSG's Power Earthing division. If you're interested in learning more about careers in power earthing or connecting with Alice about mentorship opportunities, reach out via [LinkedIn](#).