

A Day in the Life...

Green Careers



How will you change
the world?

Careers awareness resource for schools featuring STEM related career interviews. Suitable for 11–18-year-olds.

Content

Introduction	2
What do we mean by Green Career?	3
Using this resource	4
Essential skills	5
Green careers information and support	7
How STEM Learning can support careers awareness	8

Interviews **10**

1. Ashleigh Kitchiner, Senior Marine Mammal Consultant, APEM Group	12
2. Emma Thorpe-Bailey, Town Planning Consultant, Be First	11
3. Emily Shaw, Civil Engineer, Binnies	13
4. Lisa Tidswell, Manufacturing Development Manager, Caldera Heat Batteries	15
5. Faith Nicholls, Analytical Scientist, Centre for Process Innovation	17
6. Des Campbell, Forester, DAERA Forest Service NI	18
7. Georgina Sturgeon, Research Assistant, Earthwatch Europe	20
8. Stephanie Holland, Project Documentation Engineer, Eaton	22
9. Daniel Walsh, Chemistry Engineer, EDF Energy	24
10. Alice Kilner, Environmental Advisor, Gratte Brothers	24
11. Emma Faulkner, BREEAM Infrastructure Assessor and BIM Controller Jackson Civil Engineering Ltd	26
12. Tobi Elusakin, Sustainability Consultant, Mace Group Limited	27
13. Emily Butterwick, Sustainable Development Lead Adviser, Natural England	28
14. Hazel Comyn, Geo-environmental Consultant, Ramboll	31
15. Amelia Browne, Graduate Environmental Consultant, Ramboll	32
16. Kate Conlan, Sustainability Strategy & Reporting Consultant Ricardo Energy & Environment	33
17. Graeme Sutcliffe, Development Verification Engineer, Rolls-Royce SMR Ltd	35
18. Anna Turitsyna, Digital Power Account Manager, Schneider Electric	36
19. Deborah Kenyon Roberts, Independent Software Engineer, Self-employed	37
20. Steve Markham, Company Director / Quality Engineer, STM Quality Limited	39
21. Jayne Roberts, Environmental Safety Scientist, Unilever	41
22. Octavia Brayley, PhD Researcher, University of Birmingham	43
23. Fiona Bunn, PhD Researcher, University of Edinburgh	45
24. Tariq Umar, Lecturer in Construction Project Management, University West of England	46
25. Rachel McEvan, Environmental Manager, WSP	48

Activity challenge: Which job is this? **50**

Introduction

There is an urgent need to address the challenges of climate change. The transition to a low carbon economy will be key in ensuring continued economic growth whilst addressing these challenges.

This transition has already begun, in the UK alone there are over 400,000 jobs in low carbon businesses and their supply chains. The number of such jobs is expected to grow, the government has set an ambitious target for two million green jobs in the UK by 2030. The government's green jobs taskforce identified the 'clear pathway into good green careers' as being one of the pillars to a lower carbon economy.

We are supporting student and teachers' awareness of these future careers.

We aim to ensure that young people have the best opportunity to succeed in a chosen profession, and the economy has the skilled and talented future workforce required to successfully transition to a low carbon economy. At STEM Learning, we are committed to the power of STEM education to change lives.

Explore this collection of STEM Ambassador short interviews looking at the daily life, career path and advice from people whose jobs, roles and careers are STEM related green careers.

STEM Ambassadors are volunteers from industry and academia who work, study or research in a STEM related industry. STEM Ambassadors support the delivery of effective and engaging careers awareness through a variety of interactions for teachers, careers advisors and young people. Helping to develop knowledge and skills.

Visit <https://www.stem.org.uk/stem-ambassadors> to find out more.



What do we mean by green career?

Any job, role or occupation that contributes to preserving or restoring the environment and our planet can be described as a green career. Many industries are immediately seen as 'green' such as renewable energy, energy efficiency, green technology such as electric cars, improving the environment or agriculture processes but it may surprise you to find out that most industries have green careers.

There is a green career to suit everyone, roles vary across a whole host of industries, each requiring different skill sets and offering a satisfying career that many may not have thought of as 'for them.'

These are a tiny fraction of the jobs and roles classified as green careers, the one thing they have in common is they are effective in the short and long term, literally making the world a better place.

Farm manager, coastal defence engineer, climate change specialist, data analyst, wind turbine technician, solar panel installer, forester, conservationist, electrical equipment repairer, architect, aeronautical engineer, meteorologist, environmental consultant, waste management specialist, energy and carbon analyst, packaging designer, ecologist, environmental solicitor, insurance assessor, actuary and construction workers building environmentally friendly and energy efficient homes.

A successful and satisfying career needs nurturing: inspiration, the right skills, training, and qualifications are all vital, but it's just as important for young people to understand that routes and pathways into careers can be different for everyone, which could be on the job learning, an apprenticeship, or a university degree.

What do we mean by green skills?

Green skills are the skills needed to adapt services, processes, and procedures to address climate change. They can be defined as the abilities, values, attitudes, and knowledge needed to develop and live in a resource-efficient and sustainable society.

As industry changes to support net zero, new jobs will be created with green skill requirements. Current jobs and roles will need to adapt, requiring employers to retrain employees and realign skills and experience to meet the needs of their industry.

Education has a key part to play, by raising awareness of the opportunities available to young people, reinforcing skill development, and highlighting career paths and qualifications needed whether a student is heading for university, an apprenticeship or employment.

What does 'Net Zero' mean?

Put simply, it is the reducing of greenhouse gas emissions to as close to zero as possible, with any remaining emissions reabsorbed from the atmosphere by oceans and forest. The UK target is to meet our net zero commitment by 2050.



Using this resource

Gain insight into a variety of green jobs, roles, and careers through these short interviews from STEM Ambassadors. Use the resource in the classroom to support careers awareness, create real world context for curricular subjects, address stereotyping and build student career aspiration. The suggested age range for this resource: 11-18 year olds.

Gatsby Benchmarks

The content is supportive of the following Gatsby Benchmarks.

Benchmark 3 Addressing the needs of each pupil – interviews are from a diverse range of individuals helping to address career stereotypes and raise career aspiration.

Benchmark 4 Linking curriculum learning to careers – interviews support student research into STEM related careers forging links between real world context and curricular learning.

Activity suggestions

The following ideas are designed to engage students with the interview content and to expand general awareness and knowledge of green careers. Suggestions have been grouped within estimated time limits for ease of use. Select the interviews you will be using; this could be all or enough of them to provide variety. Print as needed or share digital versions with the students.

Up to 15 minutes

1. **Engineering or not** – ask students to identify which interviewees work within the engineering sector, consider why engineering might be a key green career industry.
2. **STEM or not** – make educated deductions as to whether interviewees use biology, chemistry, physics, or maths in their work, discuss the role these subjects play in potential careers.
3. **11 and now** – which of the interviewees are in a career that they considered aged 11, consider why so many people change their career plans as they grow older.
4. **What is an MBA** – define an MBA and which of the interviewees has one?
5. **Scientific research** – ask students why scientific research is important within the context of climate change and green careers.
6. **Who needs computing** – ask the students to score five of the roles from 0-5 (5 being the highest) identifying how strong the jobs need is for good digital or computing skills. Ask students to think about why employers might need their employees to have good computing skills in their employees.

***Teacher notes:** You can refer to the digital skills table on page 6. (Note: all jobs, roles and careers need a degree of computing competency – sending and responding to emails, operating a digital till, calculating costs for a quote, building a website to analysing complex statistics and digital data).*

Up to 30 minutes

1. **Define green careers and green skills** – ask students to conduct research into what green careers and green skills are and which skills or jobs are most needed in the UK.
2. **What job is this** – ask students to identify which job title goes with which description, encourage them to share their thoughts on why they selected as they did, how accurate were they and were they surprised by the answers.

***Teacher Notes:** Print off the two sheets at the back of the booklet pages 50 and 51, cut out the descriptions and the job titles making sure to divide them up before issuing to students. Do not share the interviews before the students engage with this challenge.*

3. **Which career** – which of the careers appeals to students the most and why, ask them to research potential career paths that they could follow to achieve a similar career.
4. **Greenest STEM career** – ask students to rank the interviews into the order that they think have the greenest credentials providing reasons for the chosen ranks.
5. **Salary comparison** – ask students to select five of the interviews and look up comparable jobs to find out about salaries. Does the salary influence their interest in the jobs, if so, why?
6. **Which employability skills are needed** – ask the students to use their judgment to identify which are the four most important employability skills for five of the interviewees. Ask the students to explain how the interviewee might use the skills in their day to day job. (Key employability skills are identified below).

Up to 60 minutes

1. **Top Tips** – review all the top tips offered by the interviewees, which resonate the most with the students. Ask them to consider how might they use the advice to prepare themselves for life after school.
2. **Green careers debate** - ask students to pick five of the case studies from the collection, research the roles, company and industry sector and hold a debate in small groups to decide which jobs or roles they think make the most long or short term difference to climate change. Compare results across the groups.
3. **Local green careers** – contact local companies and ask for information on sustainability plans and what green careers they have or the green skills they need in their employees. Share the information with the students and ask them to practice creating a CV and applying for one a green job.
4. **Green career heroes**: look up employers and industry sectors to identify those that are working the hardest towards net zero, what employment opportunities do they have, make a list of all the green careers they have, associated skills needed and qualifications.
5. **University or apprenticeship** – identify which of the interviewees went to university or did an apprenticeship, what qualifications might be needed to achieve a similar role if taking an alternative career path to that of the contributor?

Essential skills

There are skill sets desired by employers which students can develop throughout their education. Employability skills often called essential skills are transferable across all curricular learning irrespective of subject matter. Employers within all industry sectors are outlining their growing need for the talent pipeline to have strongly developed digital skills as well as key employability skills. Below we outline the basic essential and digital skills that can be enhanced to support student careers awareness.

The Skills Builder Partnership

Identified eight key skills sought by employers across all employment sectors. Teachers can work with students to use the Skills Builder Framework to progress individual skills at their own pace. Find out more about the Skills Builder Framework which is free for schools to use at <https://www.skillsbuilder.org/>



Communication <ul style="list-style-type: none"> Listening – ability to listen and understand information. Speaking - vocal communication of information or ideas. 	Creative Problem Solving <ul style="list-style-type: none"> Problem Solving – ability to find a solution to a complex situation or challenge. Creativity – use of imagination and the generation of ideas.
Self-Management <ul style="list-style-type: none"> Staying Positive – ability to use tactics to overcome setbacks and achieve goals. Aiming High – ability to set clear, tangible goals and devise a robust route to achieving them. 	Inter-personal <ul style="list-style-type: none"> Leadership – supporting, encouraging, and motivating others to achieve a shared goal. Teamwork – working cooperatively with others towards achieving a shared goal.

Digital and computing skills

Digital Skills are the product of digital literacy that we are all immersed in, especially within educational settings. The rapid use of digital technologies over the last 10-15 years have impacted the way we live our lives within a modern technological society. Digital skills can be grouped, recognised, and celebrated. The following table represents those identified by STEM Learning for the computing curriculum and supportive of employability skills desired by future employers.

Baseline Digital Skills	Computing curriculum baseline digital literacy	Computing curriculum specific skill	D&T / Engineering specific digital skills	Science specific digital skills	Maths specific digital skills
Communication	Safe technology use tools	Digital media	Digital design (CAD)	Modelling and simulation	Modelling
Presentation	Evaluative skills	Programming	Programmable embedded systems	Sensor-enabled data collection	Data analysis / data science
Word processing and DTP (desktop publishing)	Moral, ethical, and lawful behaviour	Applied knowledge of systems and networks	Digital manufacturing (CAM)	Data analysis, inference, and communication	Calculation
Data handling		Modelling and simulation		Digitally enabled explanation	Graphing
Devices, tools, and applications		Software development			Dynamic geometry
Productivity and task management		Data manipulation			
		Cyber security			

Examples of use

A good example of Baseline Digital Skills: when conducting experiments, recording results in Excel makes it easier to present those results in a graph. A design and technology or engineering opportunity: use 3D Computer Aided Design (CAD) and outputting on Computer Assisted manufacturing (CAM) and Rapid Prototyping (RP) such as 3D Printing.

Green careers information and support

The following resources are supportive of green careers and provide opportunities to further embed careers awareness. Click the buttons to access the resources or copy and paste the links.

Green Careers Virtual Careers Fair

Visit the virtual careers fair that highlights green career opportunities and explores the work of those mitigating and adapting to the challenges of climate change.

(<https://stem.exhibition.app/climatechange/>)

Action: Provide students with the link to explore careers, jobs and roles offered by the exhibitors, the career path and qualifications needed and opportunities they offer. Ask them to identify which company they would most like to work for, the job they would like to do and how will they achieve their aim.

Careers
Fair

Climate Ambassadors

Climate Ambassadors is an initiative to mobilise experts within the climate sector to engage with young people and educators and raise awareness of climate issues and the green careers committed to resolving them.

(<https://www.stem.org.uk/ccep/climate-ambassadors>)

Action: Invite a Climate Ambassador to talk to the students about their career, net zero, green skills and climate change.

Climate
Ambassador

Catalyst Magazine

Science journal for 14-19 year olds and their educators, exploring innovative science, industrial developments, associated careers and career paths. Catalyst links the world of work with curricular learning with articles and interviews. Content is supportive of climate change and the people working towards net zero and a sustainable future. (<https://catalyst-magazine.org/>)

Action: share the link with your students, challenge them to identify three articles in recent or archived editions with green career credentials, which article interested them the most and why.

Catalyst

Climate Change Educational Partnership

The Climate Change Educational Partnership (CCEP) supports the delivery of climate change related lessons and activities. Providing inspiring resources, CPD courses and opportunities for schools to engage with Climate Ambassadors.

(<https://www.stem.org.uk/climate-change-educational-partnership>)

Action: explore Climate Detectives and other climate change focused challenges and challenge students to take part. Enhance your own knowledge and skill set through climate change related CPD opportunities.

CCEP

Learn more about Green Careers

Our collections of Green Careers and Climate Change resources are free to access and include videos, case studies careers, activities, and resources to use in the classroom, at home or with a community group. (Activities and case studies:

<https://www.stem.org.uk/cxhreo> / Videos: <https://www.stem.org.uk/cxhrep> / General support: <https://www.stem.org.uk/cxhreq>)

Action: explore the collections and select three resources that you could use to make careers awareness links within your classroom teaching, using real world context and related careers.

Resources

Videos

General
Support

How STEM Learning can support careers awareness

STEM Learning programmes and resources are registered with the Careers and Enterprise Company provider directory, ensuring they are quality assured to support careers awareness:

<https://find-activity-provider.careersandenterprise.co.uk/search>

STEM Ambassadors

Supports Gatsby Benchmarks: 1, 2, 3, 4, 5, 6, 7, 8

STEM Ambassadors are volunteers from industry and academia who work, study or research in a STEM related industry. STEM Ambassadors support effective and engaging careers awareness through interactions that support teacher encounters and inspire young people's career aspirations. STEM Ambassadors can support all eight Gatsby Benchmarks, from advising Careers Leaders on ways to engage with employers, supporting careers fairs, assisting students with interview techniques, providing real world context to STEM subjects and the world of work, providing LMI information or offering job shadowing opportunities to students and teachers. STEM Ambassadors are available to help every school deliver effective careers awareness in whatever way they need it.

Find out more at: <https://www.stem.org.uk/secondary/ambassadors>

ENTHUSE Partnerships

Supports Gatsby Benchmarks: 1, 2, 4, 5, 6

A collaboration between 6–10 schools and an employer. Partnerships provide: teacher encounters, CPD, resources, teacher placements in a STEM-related industry or university and engagement with STEM Ambassadors. They have proven increased attainment in STEM subjects and through working with an employer they develop student and teacher awareness of STEM careers.

Find out more at: <https://www.stem.org.uk/enthuse-partnerships-schools-and-colleges>

STEM Learning Teacher and Careers Leader CPD

Supports Gatsby Benchmarks: 1, 4, 5

Teacher encounter led CPD focusing on STEM subjects and how to embed careers awareness in the classroom. Making connections between curricular knowledge, real world context, routes, and paths into STEM careers. Assisting teachers and careers leaders to their broaden knowledge and apply it within the school. STEM Ambassadors attend sessions to provide additional careers insight.

Find out more at: <https://www.stem.org.uk/cpd>

Nuffield Research Placements for Students

Supports Gatsby Benchmarks: 3, 4, 5, 6, 7

Raising aspirations through real-world 4-6 week STEM research or development project placements with host organisations (employers and universities) for 16-17 year olds. Students apply and develop skills and knowledge learned at school and provide meaningful contributions to the work of researchers and industry professionals. Students learn about the world of work, develop key employability skills, and increase their awareness of STEM related careers.

Find out more at: <https://www.stem.org.uk/research-placements>

Catalyst Magazine for Students and their Educators

Supports Gatsby Benchmarks: 3, 4, 5

Science journal for 14-19 year olds and their educators, exploring innovative science, industrial developments, associated careers and career paths. Contains career interviews and in-depth articles to link the world of work with curricular learning, contains links to careers and further learning.

Find out more at: <https://catalyst-magazine.org/>

STEM Clubs Programme

Supports Gatsby Benchmarks: 1, 2, 3, 4, 5

The STEM Clubs Programmes supports STEM enrichment activities to broaden knowledge and raise aspirations. STEM Clubs highlight how students of all abilities can engage and succeed with STEM subjects and aspire to an associated career. The programme offers teacher encounter CPD to embed employability skills and careers awareness within club sessions. Club activity resources relate STEM to real world context and provide opportunities to engage with employers and link to Skills Builder essential skills to develop individual student employability skills. The 'A Future STEM' activity booklet has six one hour practical and engaging career activities, from challenging STEM stereotypes to interviewing a STEM Ambassador. It is free to download: <https://www.stem.org.uk/rxg7nh>.

Find out more at: <https://www.stem.org.uk/secondary/enrichment/stem-clubs>

Careers Resources for Teachers

Supports Gatsby Benchmarks: 4, 5

Large digital library of careers support resources including activities, teacher and careers leader handbooks, videos, case studies and interviews across industry sectors. Contents key focus is STEM led curricular and non-curricular careers awareness support. Content can support non-STEM subjects

Find out more at: <https://www.stem.org.uk/secondary/careers>

STEM Virtual Careers Fairs

Supports Gatsby Benchmarks: 4, 5, 6, 7

Aimed at 13 – 19 year olds, virtual careers fairs inspire and inform; supporting young people to be better prepared for future careers. Each 360 degrees online fair, delivered in partnership with AECOM, contains a selection of industry sectors with companies hosting virtual exhibition stands. Teachers and young people can explore presentations, information, discussion topics and career routes, helping to raise awareness of the STEM led career opportunities available.

Find out more: <https://www.stem.org.uk/secondary/careers/virtual-careers-fairs>

Interviews

The following interviews are from STEM Ambassadors engaged in STEM related Green Careers.



Ashleigh Kitchiner

**Senior Marine Mammal Consultant
APEM Group**



Describe your organisation in two sentences.

APEM is a global environmental consultancy, providing a comprehensive range of integrated niche services for clients such as badger protection and marine mammal services.

Describe your role in two sentences:

My job involves designing plans to help protect marine mammals from any offshore activities. I write reviews on marine mammals and can be in the field conducting surveys when needed.

What do you do in a typical day?

A typical day is desk-based, where I could be managing the team, writing reports or speaking to clients. The list of things to do is often long and I just try and work my way through that. A non-typical day though is where I would be sent on a project offshore and survey for marine mammals or have to mitigate a project's activities.

This means I am advising if there are marine mammals present when noise is being made, because marine mammals are actually super sensitive to underwater noise. If I advise they are nearby then noise producing activities are delayed. I absolutely love being on boats and being at-sea is my happy place!

What do you love about your job?

No two days are the same. One day I could be working on a report, or project management, the next I could be on a boat surveying for marine mammals. It pays to be flexible and adaptable in this line of work.

How did you get into your current role?

I applied and interviewed as normal. During the interview I was calm and relaxed and actually ended up talking to the interviewer well over the allocated time and actually had a laugh. It was the first interview I'd had where I felt at ease, and I think it really showed. My advice is to relax and be yourself, you will shine!

What did you want to be when you were 11?

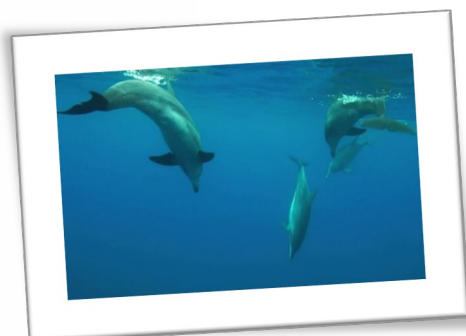
I wanted to be a journalist, I think!? Before that I always wanted to be a marine biologist, but I just never knew how.

What do you like to do in your spare time?

I like to make candles, macrame, read and take my doggy out for long walks!

What is your top tip for a young person who would like a job like yours?

Volunteer! Get out there and volunteer, meet new people and network. You'll find out what you like and don't like and you'll meet people with great ideas and insight into how you can progress in your career or studies.



Emma Thorpe-Bailey

**Town Planning Consultant
Be First**



Describe your organisation in two sentences.

Be First is an urban regeneration company that has been set up by the London Borough of Barking and Dagenham. Be First manages the Borough's estate renewal and new home building programme.

Describe your role in two sentences:

I work with land owners and developers to secure planning permission for new developments, such as new homes, schools and leisure centres. My job involves managing competing demands for land, and making sure that all new developments follow relevant environmental and sustainability policies.

What do you do in a typical day?

My job requires me to be a good problem solver and to operate in a very collaborative way. In a typical day I would have meetings with a range of different people, such as architects, local people and local planning authorities to discuss new development projects. I would also write reports justifying new planning applications or provide advice to clients. Finally, I would go out on site visits, exploring the land that I am going to be working with.

What do you love about your job?

I love that I get to positively influence where and how people live. For all of the new homes and places that I work on, I make sure that they are as sustainable as possible, from the types of energy that they use, through to the right use of trees to manage flooding risk and to encourage more wildlife to move in. I know I am making places nicer, cleaner and greener to live in.

How did you get into your current role?

I really enjoyed studying geography at school and seeing how our urban, rural and coastal environments change over time. I studied City and Regional Planning at Cardiff University and then Spatial Planning at UCL.

What did you want to be when you were 11?

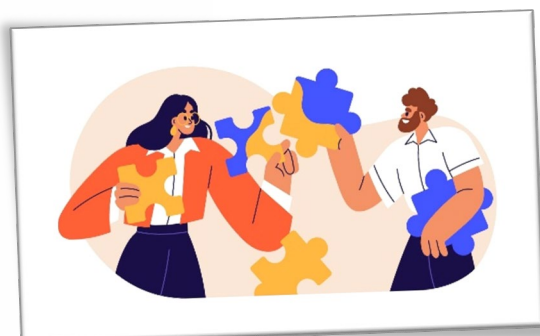
Either a florist or a police officer, because I loved nature and helping people. I use both of these in my current job, but in a way that can have effects that are lasting years and decades, as new homes and green spaces around them will last a very long time.

What do you like to do in your spare time?

I like to spend time in my vegetable garden, growing new sorts of tomatoes and potatoes.

What is your top tip for a young person who would like a job like yours?

I'd recommend going out and exploring their local area and asking, what works? What doesn't work? How could this place be made better for the people living here? I also recommend looking at Apprenticeship opportunities. The Royal Town Planning Institute's (RTPI) website has lots of resources for young people looking to get into planning, either through apprenticeships, university education, or working.



Emily Shaw

Civil Engineer Binnies



Describe your organisation in two sentences.

Binnies helps our clients across the globe efficiently and effectively collect, store, move and treat water and wastewater, plan and manage watersheds and harness the energy embedded in the treatment and movement of water. We find solutions that not only manage flood and coastal erosion risk but also maintain and enhance our current environment without compromising the ability of future generations to meet their needs.

Describe your role in two sentences:

Civil Engineers shape the world we live in, they provide us with clean water, build roads, bridges and railways. I work as part of the flooding team where we work to protect us from flooding and maintain the natural environment.

What do you do in a typical day?

My days are always varied as it depends what projects I am working on at a given time. So far during my time Binnies I have designed drains around a reservoir, I have undertaken modelling for sewers in Hong Kong to make sure they are able to cope with situations such as loss of power. I have undertaken assessments to ensure bridges are safe. I am working on a project to improve drainage in forests which involves lots of design work.

I am seconded to the Environment Agency at the minute for 4 days a week where I support a team creating the 2nd cycle Flood Risk Management Plans. These plans set out how organisations can work together to manage flood risk. I attend the office for 2 days a week and I work from home the rest. At Binnies I am able to have a 9 day fortnight, which means I condense my hours so that I get every other Friday off.

What do you love about your job?

It is so rewarding to know that your work is going to make a difference to people and the planet. It is an amazing feeling designing something and it has your name on it and then actually seeing it being built. Additionally I am so lucky how varied civil engineering is and that I have the opportunity to work in different sectors, not just in flood risk management. I have had the chance to rotate to a different team and I worked with the hydraulics team for 6 months working on creating models of sewers.

How did you get into your current role?

I studied BEng Civil Engineering (with an integrated foundation year because I didn't study A Level Mathematics). I did a summer placement with AECOM in between my 2nd and 3rd year of uni, where I worked with the water team. I then undertook a masters which was titled 'water, energy and the environment'. A few weeks into my Masters course I was approached by the recruitment team at Binnies via LinkedIn who encouraged me to apply for their role of graduate civil engineer. I applied and had an interview and was offered the role before I finished studying for my Masters.

What did you want to be when you were 11?

When I was 11 I did want to be an engineer. I used to watch programmes with my dad about sewage treatment when I was little and I was fascinated!

What do you like to do in your spare time?

In my spare time I enjoy going away in my campervan and going on walks and wild swims. I am also a keen cyclist and I took up bouldering during the pandemic and I usually go to my local

bouldering twice a week. I taught myself to crochet recently and I always have too many projects on the go!

What is your top tip for a young person who would like a job like yours?

I would say to use resources to find out more information about engineering. You can find lots of useful videos on YouTube as well as reading books. I read the following books when I was trying to learn more about civil engineering: 7 wonders of the industrial world, why buildings stand up and Brunelleschi's dome.

Work experience is incredibly important - I did 2 weeks work experience when I was 16 and I spent one week with a civil engineer and one week with a structural engineer.

This experience ultimately made me decide that I wanted to be a civil engineer. I have worked since I was 16 and I feel this gave me transferable skills and examples to talk about in interviews so that really benefitted me. LinkedIn is a very useful tool and I'd recommend getting that, it can be used to find companies and jobs, and it works the other way around too and helps companies find you.



Lisa Tidswell

Manufacturing Development Manager Caldera Heat Batteries



Describe your organisation in two sentences.

Caldera is a Climate Tech start-up. We make the Warmstone heat battery which uses low carbon electricity whenever it is available to warm a solid core, storing this energy efficiently until the heat is needed by houses or industry.

Describe your role in two sentences:

I help Caldera build their manufacturing. But, as we're a small team it means I do everything from buying things (parts and machines) to making models of how much things will cost, to looking at how everything and everyone in the business fits and works together.

What do you do in a typical day?

There is no typical day. Although there are some regularly repeating tasks for me. We start every morning with a full team meeting to understand what everyone's priorities are for the day. Then I usually buy a few things for the business - it might be pieces of equipment (like a helium leak tester, or new fabrication plant, or a new CAD workstation), or often materials to support our manufacturing (like steel, or pipework), or one-off things to trial or test.

But outside this, I might be working on:

- writing an application for a new grant, or working on an existing grant
- building a product cost model to understand a potential manufacturing scenario
- researching equipment or manufacturing processes
- writing or reviewing request for quotation documents (RFQs)
- importing or exporting something from the UK
- attending a strategy day, supplier visit, management meeting or trade show
- discussing the research and testing needed for the next steps
- sweeping the floor if there are visitors coming and my day's priorities are not as important as everyone else's!

What do you love about your job?

I love the variety and challenge that comes with every day. Because we're a small team, we all have expertise in different areas plus a lot of broad and general skills. This means everyone gets involved in things that challenge them and help them grow both as a person and as a professional every day.

I also get to directly contribute to things like the overarching company strategy, customer and investor conversations. I even get to be involved when we're running experiments, building things, testing things or discussing new research.

How did you get into your current role?

A combination of luck and skill! For the luck, I was in the right place at the right time to meet the CEO when he had a requirement for my skillset. To develop those skills I studied physics and mathematics at university, and worked in a research laboratory while I studied. After university, I started working on an entry-level purchasing/systems job for a company that manufactures doors and windows.

From there onto supply chain work in a wine bottling plant, material/planning & logistics, and cost accounting in an automotive supplier, and then here to Caldera. I took transferable skills, enthusiasm, and a keen desire to learn new things to each job - which allowed me to move up, be offered additional challenges, and complete an MBA while working.

What did you want to be when you were 11?

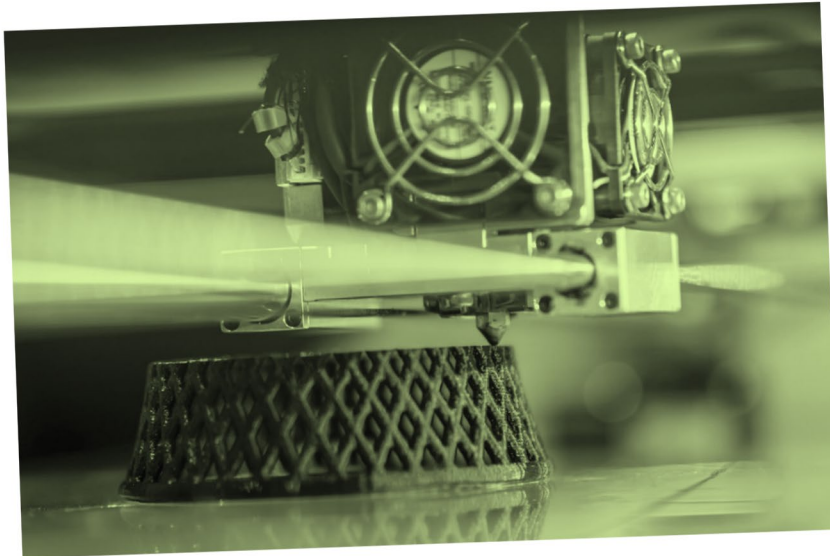
When I was 11 I wanted to be a horse vet. I worked towards this goal all the way through to the end of my first year of university. At this point, though I realized (having taken biology, chemistry, physics, mathematics, and English in my first year), that I enjoyed physics and math a lot more than biology!

What do you like to do in your spare time?

I'm a keen runner (3 marathons under my belt), and I've recently gone back to Crossfit as an extra endorphin rush. I spend most summer evenings and weekends sailing with my boyfriend on his restored 1911 French fishing boat and reading adventure novels when we're at anchor.

What is your top tip for a young person who would like a job like yours?

Don't be afraid to explore the interesting things that challenge you. Having a broad skill set and a willingness to work outside your comfort zone is an advantage in a start-up where you might be asked to try your hand at something new on a daily basis.

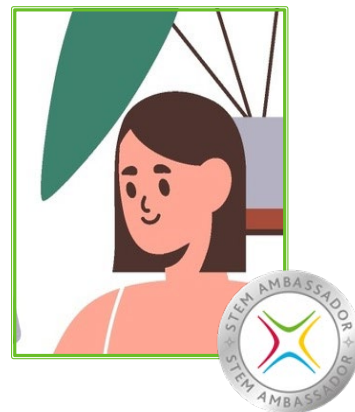


Faith Nicholls

Analytical Scientist Centre for Process Innovation

Describe your organisation in two sentences.

At CPI we help companies develop, prove, scale-up and commercialise new products and processes. CPI help to create a healthier society, cleaner environment and vibrant UK economy, by ensuring every great invention gets the best opportunity to become a successfully marketed product.



Describe your role in two sentences:

A tremendous amount of analytical testing is required to support a product from discovery / development and clinical trials to manufacturing and marketing. As an Analytical Scientist I am involved in method development/validation to characterise a sample in a specific and sensitive manner, for example testing concentration, purity, stability.

What do you do in a typical day?

There isn't usually a typical day as I am on a number of different projects as well as everyone else, so I could be in the lab doing my own stuff or shadowing/helping out others and learning how to use different lab equipment as there's so much to learn. My time is usually split up between 50% lab work and 50% desk work, as I have to attend customer meetings/internal meetings, as well as write up lab reports.

What do you love about your job?

I love that I receive a lot of support to develop new skills/techniques and am constantly pushed towards personal development. As well as this, I love what CPI stands for and it is great that not everyday is the same - we are all on different projects doing our own things so it is exciting to hear what each business unit is doing!

How did you get into your current role?

I graduated from Liverpool John Moores University in April 2021. In my final few months I secured a job in a COVID-19 PCR lab, however after 10 months there I felt I had learnt all that I could and wanted a new challenge/change. I remember driving past CPI a lot and thinking how cool it would be to work there so decided to browse their website to see if they had any vacancies, and saw that they were recruiting analytical scientists for their new RNA Centre of Excellence. I registered my interest and after having an interview I was successful!

What did you want to be when you were 11?

When I was 11 I had no set idea of what I wanted to do. I feel like there is a lot of pressure when you're young to know what you want to do in life, I still feel like I don't 100% know. I have always enjoyed science, but I remember wanting to be a pilot, a doctor, as well as about 40 other things!

What do you like to do in your spare time?

I enjoy spending time with my family, going to the gym, and playing games on my switch.

What is your top tip for a young person who would like a job like yours?

Try and get experience but don't stress if you can't. Yes it is beneficial to have lab experience/etc, but applying the skills you already have also helps, e.g. from part time jobs. Try out different things and see what you like best, as the field of science is vast!

Des Campbell

Forester
DAERA Forest Service NI

Describe your organisation in two sentences.

Forest Service is an agency of DAERA (Department of Agriculture Environment and Rural Affairs) in N Ireland.

Forest Service manages 75000 hectares of land, producing timber, recreation facilities and protecting habitat for wildlife all done in a sustainable way



Describe your role in two sentences:

My role is to establish new forests and look after those that exist as they grow. I manage forests to produce many benefits for society in a sustainable way. That means that I have to manage forests in a way that they will produce benefits to people and protect the environment and the economy for future generations.

What do you do in a typical day?

Days can be quite varied. My particular role at present is a Health & Safety officer. Forestry operations are quite high risk and require a great deal of expertise to carry them out safely. I carry out inspections on work sites and give guidance to other staff on safe working practices. I have previously been involved in managing tree planting operations to establish new forests and replant felled trees, as well as timber harvesting operations to produce wood for sawmills.

A typical day for a Forest manager may involve dealing with queries from the public, visiting active work sites and dealing with staff or contractors whom you have commissioned to carry out various types of tree work.

What do you love about your job?

I love having a job which allows me to work both inside and outside , and doing something that provides real benefits for all of society. Currently one of the biggest threats to society is that of climate change and it is gratifying to be involved professionally in one of the most important fields to help mitigate against that, i.e. capturing carbon by growing more trees and subsequently producing many benefits including timber from those trees to lock up that carbon for many years.

This benefit has been known to Foresters for decades but now governments are starting to realise that fact across the world. It is a great time to be involved in Forestry and to know the facts behind it all.

How did you get into your current role?

Forestry was something I thought about when I was at school. I was in the Scouts as a boy and loved playing outdoors including camping and hiking. I could not see myself working indoors full time.

I asked my Careers teacher in my third year at high school about Forestry and he gave me a single sheet showing the progression I could take. I took it and the rest is history.

What did you want to be when you were 11?

I wanted to work outdoors, either as a Vet, working with animals or something involving the natural world.

I was more convinced about Forestry when I reached 14 and that was where I ended up!

What do you like to do in your spare time?

Long hikes usually over many days in warm countries. Playing (Drums & Saxophone) and listening to music.

What is your top tip for a young person who would like a job like yours?

There is great demand for professional Foresters , more so now than ever before. If you like the idea of working in a wonderful environment doing something that benefits society then check it out locally to get an idea. The jobs are certainly there both at a craft level (Forest worker) and at management level (Forester / Forest Officer)



Georgina Sturgeon

**Research Assistant
Earthwatch Europe**

Describe your organisation in two sentences.

Earthwatch is an international environmental charity with science at its core.

All its projects and environmental actions are based on scientific evidence and backing. Projects include: Tiny Forests, Freshwater watch (monitoring local water catchments), Teach Earth and more.



Describe your role in two sentences:

My role is focussed on project delivery across the UK. The role is a mixture of practical conservation work, environmental education and research.

What do you do in a typical day?

There is no typical day for me. In my role I do a lot of travelling across the UK. On average I am away 3 days every other week. I travel to the Tiny Forest sites across the UK and host a science day for the local communities: schools, youth groups, community groups or local businesses.

I am there to train these volunteers and facilitate citizen science data collection at our Tiny Forests. This data helps us to assess their environmental and social impacts. When I am in the office, I organise and host online training sessions, data analysis and science communication to our network.

What do you love about your job?

I love that my job is so varied, between office work, volunteer engagement, practical conservation and research. I love that I get to be out in the field doing practical conservation, I know that I really am doing good. It is also very rewarding working with volunteers as the impact is felt instantly. I also really enjoy working for an environmental charity, as my colleagues are equally as passionate about their work.

How did you get into your current role?

I went to university and studied Environmental Science. After leaving university and went travelling and volunteered overseas. While volunteering overseas I gained more of an idea of what I enjoyed: research, and environmental education.

When I got back, I got a job for an education charity, hosting workshops and training for students and teachers. I enjoyed this but wanted to get into the environmental sector. So, I applied to Earthwatch Europe for an internship and have been there for 1.5 years.

What did you want to be when you were 11?

When I was 11, I didn't know exactly what I wanted to do (and that is fine) but I was getting more of an idea of what I liked and didn't want to do. Even now I am still learning. I have always wanted to work outdoors, doing good, away from an office doing the same thing every day. This made me start to look at role models around me like David Attenborough.

What do you like to do in your spare time?

I am an active person, so spend a lot of my time outside. I enjoy going for runs, I often find this a great way to de-stress after a long day. I play hockey socially for my local club. I also enjoy a good walk, whether that's my usual dog walking route or a local walking trail. Although, I am a sucker for a good movie night when it gets too cold!

What is your top tip for a young person who would like a job like yours?

My best advice to get into any environmental career is start volunteering. The environmental / conservation sector is very competitive, so it isn't always easy to land your dream job straight away. A great way to put yourself above the rest is to start volunteering in your free time, with a local organisation or charities to get your foot in the door. While volunteering you are meeting great connections, learning skills and gaining confidence.



Stephanie Holland

**Project Documentation Engineer
Eaton**

Describe your organisation in two sentences.

Eaton are a power management company. Currently focusing on backup power, electrification, EV and renewable energy support. Eaton is a global company with a huge drive on sustainability and improving technology for future generations.



Describe your role in two sentences:

I work within Project Engineering, working on all aspects of documentation that supports a project during its lifecycle. Producing, editing, managing, recording, approving and working directly with Project Managers to help their projects go smoothly and professionally.

What do you do in a typical day?

I can be working on support requests from my team, working on producing documentation or being on sites as a support resource. It's quite varied!

What do you love about your job?

I get to use all my skills, knowledge and I get to be an important part of a team.

How did you get into your current role?

All of my experiences throughout my career have made this job perfect for me. My engineering degree gives me the edge with this technical role.

What did you want to be when you were 11?

When I was 11, I wanted to be a teacher. But I also wanted to be creative and make things. So an art or a design teacher would have been ideal!

What do you like to do in your spare time?

Walking my dog, baking, painting and photography.

What is your top tip for a young person who would like a job like yours?

Get as much experience as you want to, do some volunteer work and never be afraid of asking questions!



Daniel Walsh
Chemistry Engineer
EDF Energy

Describe your organisation in two sentences.

Britain's biggest generator of zero carbon electricity, generating zero carbon electricity from wind + nuclear + solar.

Describe your role in two sentences:

Manage the reactor chemistry of an advanced gas cooled nuclear reactor.



What do you do in a typical day?

Monitor plant performance using a wide range of data sources and technology to ensure optimum performance whilst minimising operational & safety risks. Review, evaluate, and document chemistry data, taking the appropriate action to ensure that adverse trends are identified and corrected promptly to ensure compliance with station, regulatory and site operating licence requirements.

Control plant performance to target conditions through establishing operational instruction and actions, for all phases of plant operation. Inform key operational decision making from a specialist perspective & provide conservative advice on safety issues. Proactively assess tasks and operations, providing risk assessment, advice, contingency & mitigation, in accordance with relevant safety and technical legislation. Perform plant investigations, identifying new risks and anomalies, and advocate these within the organisation.

What do you love about your job?

Technically challenging. Good sense of purpose as the business produces carbon free electricity for millions of people.

How did you get into your current role?

Initially chemistry apprenticeship after finishing A-levels, experience of working on nuclear submarines (pressurised water reactors) following completion of degree. Applied for position following completion of Masters degree and gaining membership of the royal society of chemistry.

What did you want to be when you were 11?

Absolutely no idea.

What do you like to do in your spare time?

Look after my daughter (2 months old) and walk my dog Zak through the countryside.

What is your top tip for a young person who would like a job like yours?

Seek to gain experience over qualifications. Apprenticeships are far more valuable than a typical degree in terms of applicable experience.

Alice Kilner
Environmental Advisor
Gratte Brothers



Describe your organisation in two sentences.

Gratte Brothers is one of the UK's leading independent building services companies providing from one source a complete range of electrical, mechanical, security and commercial catering facility services. Our largest division is our mechanical and electrical engineering, working on a number of large construction schemes in residential, industrial and data centre developments.

Describe your role in two sentences:

I work across an engineering company to strive for a more sustainable future. I regularly visit our sites to see where we can make those improvements to key areas such as waste management and emissions. In addition, I assess the company's environmental performance to ensure we are moving in the right (sustainable!) direction. As part of this, I'm currently spearheading the Groups' journey towards a net-zero future.

What do you do in a typical day?

My job tends to have two types of typical days! I have a balance of working in the office and working at our construction sites, which is amazing to have that variety. The first kind is a site visit. We work at a variety of construction sites, once the building is up and all of the inside engineering is required! I carry out visits to assess how these sites are set up from an environmental point of view, looking at things such as waste management and emissions reduction. I chat to the site teams to see if they have any ideas on how we can do even better environmentally. It's great to see how these amazing buildings actually get built and walk around in your hard hat and hi-vis inspecting what's going on!

The other side of my role is to handle the business strategy side of the environmental work we do. I present to our clients to show them what we are doing and why they should want to work with us, talking to them about how we are always moving forward! I also lead our net-zero strategy, which is a strategy to get us to the point where we no longer have any emissions adding to the atmosphere, and so reducing our impact on climate change! I work with the directors across the business to put the needed actions in place and track how well they are working to achieve our goals.

What do you love about your job?

I get to make positive, current change to the way in which we are working and can directly see how these changes reduce our impact on the environment. The need to be up to speed on what is happening in the construction industry and with new environmentally friendly technologies and opportunities means I get to spend a good amount of time reading interesting articles.

There is a great community of people passionate about the environment across the construction industry. Connecting with them and being able to share ideas and thoughts about the industry and the wider environmental challenges has been a real privilege.

I have been able to work on some really high-profile developments and projects, and seeing the new building or redeveloped area go through the stages from just a piece of land to a whole modern area is really exciting. - I get to work with people, both across my business and in others, all the time.

I get to talk about my passion at work all the time! People love to discuss the environmental challenges with me and throw their ideas in, and there's not many jobs where you can say you directly get to work on the thing you are most interested in, every day!

How did you get into your current role?

I have always had a passion for the environment and wanted a job which would allow me to make positive change for the planet. Following this passion, I studied environmental science at university, which allowed me to experience a wide variety of subjects, from laboratory based environmental research through to environmental management and climate change.

Out of university, I got a graduate role as an environmental consultant and specialised in contaminated land consulting. I was involved in huge new developments across the country, making sure they were taking the ground conditions into account before anything started on site!

After five years in consulting I decided to look for a change and found my current role. The switch from consulting, so working for lots of different companies, to being an internal advisor, so working for just one, has allowed me to use my knowledge and experience in so many different ways. Having my degree and the experience from my first job allowed me to see where I could fit in and make that positive change. Really, following that passion for environmental protection has been the key to achieving both my degree and my roles following university.

What did you want to be when you were 11?

When I was 11 I wanted to have a job like David Attenborough, which definitely inspired my love for science and the environment! It led to me getting involved in any eco team activities at school, and eventually choosing to study the environment at university. It's also inspired me to travel to as many places as I can and see the world, which only makes you want to save the planet even more.

What do you like to do in your spare time?

I absolutely love to travel. I take all of the opportunities to have weekends away in different places across Europe and further afield when I go for longer! I also love to play team sports; I currently play hockey for a local team and it's such a great way to be involved with a group of people and do something competitive.

Outside of these I try and see my friends and family as much as I can, look after my very overgrown garden, and keep myself healthy with running and exercise. When time allows, I undertake some volunteering in my local area, for example helping with some community litter picks.

What is your top tip for a young person who would like a job like yours?

Get involved in anything you can, to find where your passion lies. If you care about the environment, there are so many volunteering opportunities with charities and local companies, or you can set something up at your school to promote environmentally friendly actions!

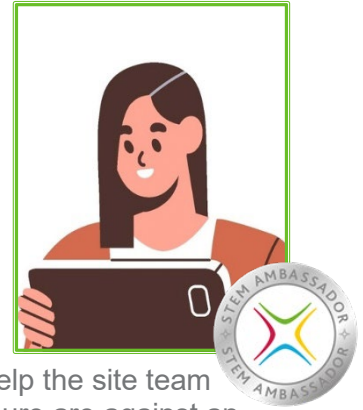
Getting involved in these things will help you talk to likeminded people and work out what sort of career you'd like to follow. I spent a few months working for Greenpeace as a volunteer and had so much fun talking to people about the environmental challenges and how we can help!

There are so many green careers now, all the way from science, technology, construction and journalism! Environmental management requires a passion for what you are doing and an ability to talk to people and getting as much experience as you can in these two areas will help you out so much. People in my field have a variety of degrees and experience, but all share the want to make a positive impact, so study something you enjoy and see where it takes you.



Emma Faulkner

BREEAM Infrastructure Assessor and BIM Controller
Jackson Civil Engineering Ltd



Describe your organisation in two sentences.

We are a national civil engineering firm who work with multiple clients across highways, flood defence, waterways and renewable energies.

Describe your role in two sentences:

I travel to multiple construction sites across the Midlands and North and help the site team to put sustainable solutions into action, I assess how effective these measure are against an international criteria. I also manage the flow of information on site using the BIM (Building Information Modelling) protocol, this allows us to share information with our site teams and client teams at the click of a button.

What do you do in a typical day?

There is no typical day for me, yesterday I was working on a fish pass in a country park, I was in the site office scanning in some documentation for upload to the assessment system, dealing with waste transfer notes for the excavations that had taken place earlier in the week and helping the Environmental Clerk to update our environmental plan for the site. Then today I was at a flood defence site in the Peak District carrying out a STEM event with a large group of year 3 and 4 children from a local primary school about environmental enhancements.

What do you love about your job?

I love being out on site and seeing the work that we are doing and engaging with the site team to help them with the information management and their environmental goals for the job. I can't imagine going back to being office based and only ever talking to the team on the phone. Since being site based I have seen parts of the country that I would never have travelled to otherwise.

How did you get into your current role?

I have worked in engineering since I was 18 years old and in that time I have been in a variety of sectors, railways, prisons, NHS, retail and water. This has given me a lot of experience but with no specialisation to a single sector, which allows me to adapt my way of working to one that suits the contract best. I was recruited by a previous manager into my current role, I worked with him for nearly a decade at another civil engineering firm and they went into administration so he offered me a role at Jacksons.

What did you want to be when you were 11?

When I was 11 I wanted to be a vet, specialising in horses. I had a love of riding horses and adored working with them in the stables after my riding lessons. I had no idea what engineering was, other than knowing my dad was a train engineer who designed and built train engines, and that didn't interest me at all.

What do you like to do in your spare time?

In my spare time I volunteer with Girlguiding and run Rainbows, Brownies and Rangers units. I also crochet, read and enjoy hiking in the nearby Peak District with friends and family.

What is your top tip for a young person who would like a job like yours?

You need to be adaptable and open to working on site, with attention to detail and a willingness to learn. There are constant innovations and changes within engineering and environmental science, so something that you used on a previous project may now be out dated and not best practice and you will need to learn and implement the new method for your current project. Organisation and planning are essential skills, especially when working across multiple locations. I would be lost without my notebook and to-do list, but finding your style of planning your work out is something that will help with my role.

Tobi Elusakin**Sustainability Consultant****Mace Group Limited****Describe your organisation in two sentences.**

Mace Group is an organisation that works across different sectors of the built environment. It focuses on developing, consulting, constructing and operating buildings in the most sustainable manner.

Describe your role in two sentences:

I help companies of different sizes and functions reduce their carbon emissions and improve their sustainability. I also work with the government to develop policy on sustainable development.

What do you do in a typical day?

A typical day would normally begin with me looking through my to-do list for the day to make sure I am clear on what I need to do for the day. Then I start check my emails for any correspondence on the different projects I work on. I'm usually working on two or three projects at a time so I go on to start work on them. I usually have 2-3 progress meetings on my projects so I prepare for them as well. At the end of the day, I check my emails again to see if there is anything I need to answer and then prepare my to-do list for the next day.

What do you love about your job?

I love that my job gives me the opportunity to learn something new almost everyday. I am still a bit early in my career and have a lot to learn so being given the opportunity to learn on several things is something I appreciate. I also love that my job gives me flexibility in terms of how I work. I am able to work from the office and from home, giving me enough flexibility in how I commute to and from work, as well as allowing me to have a bit of work-life balance.

How did you get into your current role?

A mentor of mine who was already working at Mace and whom I met via LinkedIn told me about an open role within Mace. I was interested and my mentor then referred me for the role. I sent my application through, went through three interviews and then accepted an offer of employment.

What did you want to be when you were 11?

When I was 11, I wanted to be a footballer. I have always loved football and played it since I was little but when I was 12, I had a chest problem that stopped me from playing contact sports. This made me then want to be a football coach. Alongside my work as a consultant, I coach and referee amateur games.

What do you like to do in your spare time?

In my spare time, I like to watch movies (I love movies a lot!!). I am also a part of a public speaking club where I and a group of other people learn to speak in front of a large group of people without being nervous. Lastly, I'm an avid football fan and I like going to games to help referee and coach sometimes.

What is your top tip for a young person who would like a job like yours?

My top tip is to learn as much as possible and be passionate about sustainability. Learn what you are taught in school and learn as much as you can outside of school. There are several books, events, workshops, and work experiences which can teach you a lot about the world around you and how you can make it more sustainable.

Emily Butterwick

Sustainable Development Lead Adviser Natural England

Describe your organisation in two sentences.

It is responsible for ensuring that England's natural environment, including its land, flora and fauna, freshwater and marine environments, geology and soils, are protected and improved.

It also has a responsibility to help people enjoy, understand and access the natural environment.

Describe your role in two sentences:

I help to conserve nature and create more green spaces for people and wildlife. I work on projects in West Anglia and protect wildlife using policy and legislation

What do you do in a typical day?

I have meetings with colleagues to discuss projects, plans and strategies. This can range from supporting one another with complex planning casework to discussing how we are going to help deliver a nature recovery network across England. I'll spend some time working through casework, ranging from housing developments to solar farms.

I also work on Nationally Significant Infrastructure Projects (ranging from nuclear power stations to off-shore wind farms) to make sure that we gain wins for the environment. I might then spend time at one of the National Nature Reserves that I work to protect. Part of my role involves supporting the Equality, Diversity and Inclusion network by providing events to support wellbeing. I'm currently planning a yoga and forest bathing session for our area team meeting

What do you love about your job?

I love getting to work with local communities, volunteer groups, councils and businesses to talk about the environment. I being involved in government processes and working together with likeminded people. I love making lasting change to people's lives, their neighbourhoods and their workplaces. I get to connect others with nature and share the love I have for conservation.

How did you get into your current role?

The journey here hasn't been the most straightforward. I finished school with three A-Levels in History, Media and English. After failing on my first try at University, I ended up working part time and studying at my local college to gain my diploma in Science. I had enough UCAS credits to get into Lincoln University studying Zoology. I loved this course because I got to study all different aspects of biology, chemistry and physics but through the lens of plants, animals and fungi.

After graduating, I got a job with my local council as an Environmental Enforcement Officer. It was an entry level job but I got the experience I needed to apply for the jobs I loved. Firstly, I worked for the Environment Agency for a year, protecting Land, Air and Water in England. After that, I worked for a year at the Woodland Trust as a Creation Officer, helping to plant new woodlands all across the UK. Once I had the relevant skills (from my studies and voluntary work) and experience, I made my way to Natural England.

I'm now half way up the ladder in my field!

What did you want to be when you were 11?

I wanted to be a singing, horse riding actress who designed her own clothes! A career in STEM didn't seem possible for me. I remember thinking when I was doing GCSEs that I'd be a hair



dresser. I had no idea someone like me could work in STEM, now I wake up every day excited to go to work. I'm so glad I didn't end up doing what I thought I would at 11!

What do you like to do in your spare time?

I like to be creative, whether that's writing music, embroidering, painting or making a bug hotel! I like to play video games and watch things on Netflix that I enjoy. I like to volunteer with STEM and my local conservation group.

What is your top tip for a young person who would like a job like yours?

Don't give up hope. You are absolutely capable of having a job like mine. You will experience failure or disappointment along the way but these are just part of being human.

Try to find time to volunteer in nature. There are plenty of conservation charities looking for support, the more things you try, the better you'll get. You'll gain new skills, confidence and a better understanding of what kind of career you'd like to pursue in the Environment sector.

Have a look at some websites like the wildlife trust and see if they have any events that you like the sound of. They offer days in nature, courses on different techniques for observing and identifying wildlife, creative projects... all sorts! Have a look and get stuck in



Hazel Comyn

Geo-Environmental Consultant
Ramboll



Describe your organisation in two sentences.

Ramboll is a global engineering, architecture and consultancy company, providing multidisciplinary solutions across Buildings, Transport, Energy, Environment & Health, Water, Management Consulting and Architecture & Landscape.

Ramboll is dedicated to delivering solutions that are environmentally, economically, and socially sustainable and is committed to ambitious climate action. Sustainability is embedded in all roles in the business to drive innovation and facilitate sustainable change in the industry.

Describe your role in two sentences:

I am primarily involved with investigation and remediation of contaminated land. Work is project based, mostly supporting urban development to provide sustainable ground remediation, soil management and waste minimisation solutions.

What do you do in a typical day?

No day is the same! Typical tasks will include e.g. researching the history of a site to find out about likelihood of historical contaminative industry, researching the environmental setting of the site including geology, groundwater resources, and surface water and ecosystems nearby a site which may be affected by ground contamination if there is any.

Other days might involve going to a site with a digger and/or drilling rigs to see what is under the ground and take soil and water samples and put in groundwater monitoring wells. Another day may be going to a construction site to e.g. monitor progress of earthworks and ensure any contaminated soils are being managed properly and all soils and being managed in a sustainable way.

Some days may be based in the office writing reports, analysing data from the soil and groundwater testing, and advising clients and the engineering design team on solutions to help the site development.

What do you love about your job?

My job is highly varied, I can be out on site or office based and I typically work on numerous projects at any one time, all in different parts of the country and all with different interests or issues. I work with people with many different specialties including other environmental disciplines; geotechnical, civil and structural engineers; and construction contractors on site. I particularly enjoy development work where we see brownfield derelict land getting cleaned up and put back into use.

There are now numerous new buildings, where I can say I did the early ground investigations and helped plan safe and sustainable development of the plot and saw the development all the way through to completion of the new building. I am also proud of the fact that my job and the jobs of all those around me can make a difference in terms of environmental impact.

A career in any aspect of the engineering or consultancy roles in Ramboll can be a green career. Whilst the construction industry is not known for its green credentials, there is such a vast scope for innovation and improvements in all aspects of the industry that any role, from the more environmental side of the business through all aspects of engineering, can be as 'green' as people can make them.

The industry needs people with a desire for 'green' careers and the innovation and passion that comes with that to make the leaps in sustainable design and construction practice that we urgently need.

How did you get into your current role?

I chose maths, physics and geography A-Levels mostly because I was good at maths and interested in physical geography. In choosing what to do next, I had no idea about careers but I liked the physical geography best and looking at geology courses at university, the idea of all the field trips and being outdoors appealed so I did a degree in geological sciences.

From this I knew I didn't want to go into the oil and gas industry which was really the only career talked about at the time. I did a short module on engineering geology as part of my final year and on talking to my lecturer found out about the engineering and environmental consultancy industry. I spent a year doing some contracting work with ground investigation companies and got a place to do an Engineering Geology masters course.

From my contracting work, I had come across a lot of talk about contaminated land as a fairly new topic at the time, splitting away from traditional ground engineering, so completed my project in contaminated land risk assessment and was employed as a graduate after finishing this at one of the companies I had had a short contract placement with the previous year. My role started running site work and specialising in contaminated land assessment work. I have remained in the industry since.

What did you want to be when you were 11?

I had absolutely no idea! I definitely did not know that the world of environmental consultancy existed.

What do you like to do in your spare time?

I enjoy being outdoors, I go running and cycling with friends and have even recently done a triathlon. We also have an allotment where we enjoy growing our own food but most of my spare time is really taken up with my kids.

What is your top tip for a young person who would like a job like yours?

Pick the subjects you are most interested in and you feel you are best at and you are most likely to succeed. People I work with directly generally all have a degree but are from all different backgrounds across the range of traditional sciences, geology, geography and environmental science.

Whether it's the more mathematical side of things, data analysis, or digitalisation such as Geographical Information Systems, or the less mathematical e.g. biology, ecology, environmental policy, there is a role for everyone and people from all different backgrounds can get involved in all different aspects of environmental consultancy.

There are now increasing numbers of apprenticeships and vocational courses too so again if the academic route is not for you, there are others ways to get involved. In fact, it is the diversity which makes it a great industry to work in. So don't feel you have to conform or follow a course which might not be for you, there are routes in for everyone.

Amelia Browne

Graduate Environmental Consultant Ramboll



Describe your organisation in two sentences.

Ramboll is a global architecture, engineering and consultancy company founded in Denmark. I work in the Environment & Health division, with a focus on environmental projects.

Describe your role in two sentences:

I help businesses to evaluate and reduce their environmental impact by visiting their warehouses, factories and offices and interviewing their employees. I often write reports after these site visits, but I have also facilitated presentations and workshops for the businesses and their employees to promote environmental awareness and really make a change.

What do you do in a typical day?

My days are really varied - sometimes I will be on site visits and interacting directly with clients, and other days I'll be writing reports or preparing presentations.

What do you love about your job?

I really feel like I am making a difference to companies' environmental impacts and help people to understand why sustainability is important. I enjoy getting out of the office and going to visit clients' sites to see my work in action and to act as a 'detective' to figure out how they can do things better.

How did you get into your current role?

I gained an integrated masters degree from the University of Leeds in Sustainability and Environmental Management. I worked in a few companies throughout university as an intern and lived in Canada for a year, which gave me the confidence and knowledge when going into interviews for graduate roles after uni.

What did you want to be when you were 11?

A vet!

What do you like to do in your spare time?

I love exploring the Dales and finding new hiking trails. I also write for a sustainability website, so a lot of my evenings are spent researching innovative environmental technologies and positive climate news stories.

What is your top tip for a young person who would like a job like yours?

Don't be afraid to get out there and start emailing companies looking for work experience placements (even if they are a couple of weeks long, or unpaid). Get a CV ready and start reaching out to places - you might end up gaining experience somewhere you'd never have thought of before.

For example, one summer I worked at a monkey sanctuary in Cornwall... it was definitely a talking point in my interviews even a few years later! Also, think about how your personal actions could be made sustainable and how you can show employers that you genuinely care about the environment (or whatever you are passionate about!).

Kate Conlan

Sustainability Strategy & Reporting Consultant
Ricardo Energy & Environment



Describe your organisation in two sentences.

Ricardo Energy and Environment is a global environmental consultancy. We help other organizations with a range of problems from air quality to climate change legislation, from chemical safety to carbon reporting.

Describe your role in two sentences:

I help organizations define what issues in the area of environmental and social sustainability are important to them. I then help these businesses to prepare strategies for how they will improve their sustainability and help them set up ways to report on what they are doing.

What do you do in a typical day?

I don't really have a typical day. Because all of our clients and all of our projects are so different, there isn't really a one-size fits all approach. Some days I am researching environmental regulations in India, some days I find myself pouring through the sustainability strategies of a client's competitors.

Other days I find myself leading workshops for an organization to introduce them to the concepts of environmental and social sustainability. This is the great part about working for a consultancy- no repetition and certainly no boredom!

What do you love about your job?

I love that I get to interact with so many people from so many different sectors. Being in a consultancy, our clients come from every corner of the business, government and non-profit worlds.

I love that I get to meet so many people and learn about so many different types of organizations and what their sustainability journeys look like.

How did you get into your current role?

I have always enjoyed nature and the outdoors. This love of everything the Earth has to offer inspired me to complete my undergraduate degree in Environmental Geology. After working in an internship in renewable energy research, I realized that although I was fascinated by the scientific side of environmental science and sustainability, what I enjoyed most was helping others with their sustainability problems.

I went back to university and got my master's degree in Energy, Society and Sustainability.

This degree taught me much about the interactions people have with their environments, built and natural, and the different ways we can work to be more sustainable. From this degree, I went to work at Ricardo, at first doing general work as a Sustainability Analyst.

As I grew my skill set and worked on a wide range of projects, I realized that I am really passionate about helping organizations begin or improve their sustainability journeys.

What did you want to be when you were 11?

When I was 11 I wanted to work in forensics. As I continued through high school, I realized that I did not have the stomach to work in that field and decided I would rather do biology.

I then decided that I would prefer to work outside more and not be stuck in a lab, so once I got to university, I decided to get a degree in geology.

What do you like to do in your spare time?

I love to go on walks and hikes with my dog. When it's too rainy to go on outdoor adventures (common up here in Scotland!), I also like cooking and baking.

What is your top tip for a young person who would like a job like yours?

There is no one way to get where you want to be. Everyone I have spoken to in my organization has their own unique path they took to get here.

Follow your passions and you will end up in a job that makes you happy.



Graeme Sutcliffe

Development Verification Engineer
Rolls-Royce SMR Ltd



Describe your organisation in two sentences.

Rolls-Royce SMR are developing, manufacturing and deploying a clean, sustainable and modular nuclear reactor, such that it can be factory built and transported to its end location.

This scalable technology has the ability to operate internationally and meet the net-zero needs of our future.

Describe your role in two sentences:

My role involves supporting the design of a novel new nuclear power station and ensuring we are designing, manufacturing and operating the facility correctly. This involves running testing programmes with the supply chain to mitigate the design risk.

What do you do in a typical day?

Day to day my job is very different, from test programmes, supply chain research, risk assessments, design assistance and developing strategies for how we accept our future product into service. This is what makes me love my job in engineering.

What do you love about your job?

I love my job because I am directly impacting how our future world and energy infrastructure will be defined. My job indirectly impacts the amount of greenhouse gas emissions that will be emitted into the environment, where my organisation are combatting this issue and reducing this.

How did you get into your current role?

Having achieved my A-levels in STEM subjects, I studied chemical engineering at University in Sheffield and then undertook a graduate scheme at Rolls-Royce plc. in an aerospace field for three years. This provided the soft and hard skills required to enter into the nuclear industry.

What did you want to be when you were 11?

When I was 11, I wanted to be a professional golfer, but becoming a professional sportsman I knew was a huge mountain to climb. Although, I've always been one to take things apart and design art or products, so engineering was a great route to follow. I was always academically strong and so continued to work hard in academia. To this day, I still play sports to a high level and the work-life balance of a role in engineering allows me to continue this.

What do you like to do in your spare time?

In my spare time, I love to play football, touch rugby and golf. I enjoy hanging out with friends and travelling around the country and the world to visit these. To relax, I enjoy reading or watching sports.

What is your top tip for a young person who would like a job like yours?

Network and keep your options open. There are so many different roles out there in STEM that I only realised when I go into industry, so reach out to people through academia and any family or friends to network and have a conversation with engineers in different industries.

This could be your foot in the door and we're always willing to help others trying to refine their engineering skills.

Anna Turitsyna

Digital Power Account Manager
Schneider Electric



Describe your organisation in two sentences.

Schneider Electric are a global company, specializing in energy management and digital automation, and producing both hardware and software solutions. Their mission is "to be your digital partner for Sustainability and Efficiency."

Describe your role in two sentences:

I am in Technical Sales, working typically with end users in areas like Real Estate, Hospitals and Universities, to help them with energy monitoring and power management. This is with the ultimate goal to meet sustainability targets, improve visibility of their electrical network and save on energy costs.

What do you do in a typical day?

Days can vary - some days I am on site, either meeting with customers to discuss their plans and ambitions, or doing site surveys to understand what equipment they have on site. Some days, I am working on quotes and proposals, which involves working out what we need to do in terms of hardware and software delivery, as well as engineering effort. Some days, I am networking with others in the business to understand how my specialism works with other's specialisms so we can provide a more comprehensive solution to the customer.

What do you love about your job?

Every day I get to support my customers around the country with their problems, and try to help them solve them.

How did you get into your current role?

I studied electrical engineering at university, after being interested for many years at school on how energy plays a large part in our sustainable future. After meeting Schneider Electric at a graduate fair, I applied and got a place on the 2020 graduate scheme. Following 1 year of placements in their Digital Energy division, I began my permanent role in Digital Power in 2021/

What did you want to be when you were 11?

I always knew I wanted to be an engineer of some sort, and I was lucky my family worked in maths and science already, to expose it to me at a young age. I always found technological innovations interesting and how they could be used to solve real problems around the world, but when I discovered electronics I knew this was the path I wanted to go down.

What do you like to do in your spare time?

I enjoy travelling and trying new foods, both by cooking at home and going out to new restaurants/cafes. I am a fan of the gym and going on hiking routes. Recently, I have been looking into foraging in the UK.

What is your top tip for a young person who would like a job like yours?

Find ways to learn about what's happening out there in the "real world" and reach out to those people to learn more - attend events (there are usually lots free and many have moved online) which explain new innovations in simpler ways for the public, read articles of what inventions people have come up with, find documentaries and shows that deep dive into technologies.

Deborah Kenyon Roberts

Independent Software Engineer

Self-employed, working on a freelance basis



Describe your organisation in two sentences.

As a self-employed person, I do not have to answer to corporate interests, which allows me to focus on the needs of the people (and planet!) which I serve. I use my technology and software engineering skills to collaborate with others in the Permaculture movement both on a paid and unpaid basis: I have worked as volunteer, project co-creator, and paid freelancer.

Describe your role in two sentences:

I work as an independent software engineer on a freelance basis, and I design, build, test and deploy software applications (apps) and databases used in Permaculture design and educational activities. Permaculture is an initiative, a movement, and a set of frameworks and techniques that allow us to design all our living systems (food production systems, communities, organisations) to be greener, fairer, and more sustainable by using less energy and resources.

What do you do in a typical day?

When creating software, there's no typical day but there is a typical project. Software projects run through stages (the 'software development life-cycle') from idea, analysis, design, code, test, to deploy. To develop an idea for a new app I do market research, either online or by talking to others. Or instead, the idea comes from the customer: what they need, the problem to be solved, what the software must do (known as the 'requirements').

The idea then moves into analysis and design, where we agree in detail what features the software should have, and how best to deliver them. From there, the software code is written and tested to make sure it meets the requirements. I work closely with the customer at every stage, using the 'Agile methodology' of software development. This means working from a customer-centred view and involving them frequently so they can see the software working and give early feedback or request changes if needed. There's always a project management element to the work, and a project budget (how long it will take, how much it will cost, how much I should charge).

Software engineering is a highly collaborative and creative activity, but it can be frustrating at times pouring over lines of code: testing, identifying bugs (finding out why it's not working!) and fixing them. Finally there's all the usual marketing and admin that needs to be done when working for yourself: finding new customers, keeping records and accounts, and so on.

What do you love about your job?

It's very rewarding to be able to work in this way, in this kind of role. Most importantly, it allows me to spend my time and effort in ways which align with my values, and which help others who's values match my own.

By using my skills and knowledge gained in technology roles as well as through studying an MSc in Software Engineering part-time with the Open University, I can put my skills to work in ways that help a significant part of the UK's green movement. Designing and developing Permaculture-based software apps can help more people to learn about, and practise, Permaculture more easily and effectively.

That ultimately translates to more people adopting green and sustainable lifestyles. I'm especially interested in developing software that can help businesses to adopt Permaculture practices - so that they can become more sustainable, and use less energy and resources.

How did you get into your current role?

My previous technology career was as IT Director for a privately-owned for-profit business. I really enjoyed my role; it was both intellectually stimulating and challenging. But I felt increasingly frustrated by the fact that the company was only prioritising profit, whereas my values in business are to focus on a triple bottom line of 'people, planet, profit'.

I could have looked for another technology management role in another company whose values more closely aligned with mine. There would have been nothing wrong with doing that, of course.

But I also wanted to develop a career which had a number of different strands to it, so that I could focus on all the things I'm really passionate about in life (of which Permaculture is one). It made sense for me therefore, to leave the corporate world to become a freelancer, or - as I prefer to describe it - to develop for myself a portfolio career which enables me to do work that uses all of my different passions.

What did you want to be when you were 11?

Because of my love of food, I always wanted to be a Chef. I also had a long-held love of the natural world and would have loved to become a Small-holder. I had a dream to have a sustainable small-holding where I could grow all my own fruit and veg, and cook/serve it in my own restaurant on-site.

I hadn't heard of Permaculture at the time, but if I had I suspect I would have wanted the small-holding, the food-production, the restaurant business all to be designed and run along Permaculture lines.

What do you like to do in your spare time?

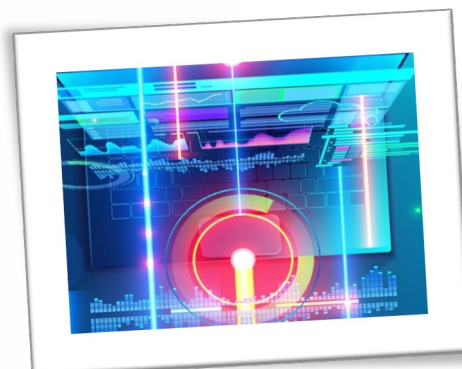
My other great passions in life are food and music. I'm (cautiously) learning to play the piano again after quitting piano lessons in my teens (my mum suggested at the time that I'd regret giving up piano lessons - and she was right). I've also started food blogging, as a growing advocate of raw foods and wild food foraging. Increasing the amount of plant-based foods we eat is excellent for our own physical health as well as for the health of the environment. Win-win!

What is your top tip for a young person who would like a job like yours?

I would say that it's probably important to have a good solid career background working for other organisations, as this will provide you the 'experience bank' you can later draw on as a self-employed software engineer.

Taking part in Hackathons and other voluntary collaborative opportunities to hone skills in both coding AND collaborating with others is also a great way to develop your skills and experience. The other key thing which is necessary is creative problem-solving skills. Any way in which you can develop these will hold you in good stead (even if it's problem-solving outside of the realm of software development).

Training your creativity and honing your skills in ideation - creating ideas, innovating, thinking outside the box, finding novel ways to solve existing problems - will put you in a strong position as a software engineer.



Steve Markham

Company Director / Quality Engineer
STM Quality Limited



Describe your organisation in two sentences.

I own an engineering consultancy - we provide support to suppliers into the car factories to develop new products and improve existing ones. We help improve car quality and help make cars that are safe, reliable and comfortable to drive.

Describe your role in two sentences:

I work with chemists, scientists and other engineers to help develop or improve materials that are more sustainable, easier to reuse or recycle which are used in the car industry. We aim to be able to recycle all the parts of a car when it has come to the end of its useful life.

What do you do in a typical day?

My days are usually different as I work with different clients - some days I'm chairing meetings, helping people work together. Other days I could be using a computer to generate documents and share them with other people. Some days I could be working in a factory environment, training people to make the best quality product that they can. I can also be working in a laboratory conducting tests on products or materials.

What do you love about your job?

Engineers pretty much do one thing - and that's solve problems. I often work with teams of people who work together to overcome a problem with a good solution. Some problems could take months to solve, with many different people involved, all working together in a project just to solve one problem. For me, the best thing is working in, or leading a team to come up with a good solution.

How did you get into your current role?

I always wanted to work in engineering since I was a small boy as my dad and grandad both worked in engineering - my dad made press tools that shaped metal into such things as car doors, wheel-barrows or kitchen sinks. My grandad was a gun maker. I left school at 16 and began an engineering apprenticeship at a company that made weighing equipment which took 5 years to complete until I was 21.

My apprenticeship involved one year spent at college learning more about engineering, while the next 4 years were spent in the many departments, learning from different people about their roles. I gained my first job after my apprenticeship as a production engineer - a person who designs the manufacturing process.

Since then I have had many roles in engineering, working with many different materials such as steel, fabric, electronics and plastics. For the last 17 years I have run my own engineering consultancy, working with many different clients, helping them to improve their products.

What did you want to be when you were 11?

I knew when I was even younger than 11 that I wanted to be an engineer, though I only knew what my dad and grandad did. I had no idea that there were so many different engineering industries, or different types of engineer.

I was very lucky to have gone into the factories where dad or grandad worked so that they could show me the things that they made. I used to love making things with Lego or Meccano which were good toys to help me be creative.

What do you like to do in your spare time?

I enjoy spending time at home - with the type of work that I do I often spend many nights away from home during the week, so weekends are precious to me. I enjoy being outside, tending to my garden or just sitting ,listening to the wildlife. I also play drums and the piano - but not at the same time!

What is your top tip for a young person who would like a job like yours?

Being an engineer isn't just being good at understanding mathematics, science or design technology. There are skills that you need - how to communicate - and that doesn't mean just reading and writing - it means listening too.

We also need to work well in teams or small groups. We also need to keep up with understanding new technology or new materials, so an eagerness to learn is important. Do your best while you're at school and don't worry if you haven't decided what you want to do yet - many people I know have changed careers during their working life.

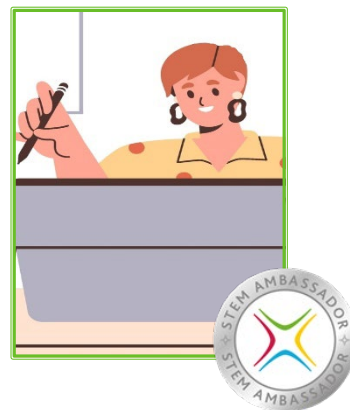


Jayne Roberts

Environmental Safety Scientist
Unilever

Describe your organisation in two sentences.

Unilever is a global consumer goods company making a variety of products including shampoo, soap, skin creams, laundry products, surface cleaners and food. Our brands include Persil, Dove and Magnum.



Describe your role in two sentences:

My role involves ensuring the products we make and are used every day around the world are safe for the environment.

What do you do in a typical day?

A typical day for me starts with reading my emails! Some days I have a lot and some days not so many. I act as a point of contact for various teams around the world developing new products so quite often there will be various questions about particular ingredients and whether we consider them to safe to use.

I also have to attend a lot of meetings, some of these are concerned with the day to day running of any on-going experimental work and some are more research based where we may be working on a more long term project. I am also involved in various groups which are made up of representatives from different companies who meet regularly to discuss joint projects. I can feel sometimes like I am juggling lots of different activities!

When I do get some time to myself, it gives me the chance to get on progressing my research and learning about new topics. Even after 20 years I feel there is so much I still don't know and I enjoy spending a couple of hours teaching myself something new.

What do you love about your job?

I have been in the same job now for over 20 years and I think that is because it has been so varied. Initially I spent the majority of my time in the lab conducting experiments. I loved the practical, problem solving aspect of it.

Over time I became more interested in what was happening to the data and information I was generating and so started to expand my role to understand what it used for. This has grown over the years so that now I don't do very much practical work anymore although I still get involved leading lab work and providing technical expertise to others.

I work in various teams with people who have different knowledge and skills to me and I like that we can work together to solve a problem. I think the thing I am still most proud of, even after 20+ years, is being able to walk into a supermarket, see products on the shelves know that I have played a small part in getting them there.

How did you get into your current role?

At university I studied for a Combined Science degree in chemistry and biology. I didn't really know what job I wanted at that point, just that I was to work in science. I actually had no idea that my current role existed until I had started working for Unilever.

After graduation, I was fortunate to get a temporary job (which was eventually made a permanent role) with the company as a research assistant working on the development of Dove shower gel.

After a couple of years in that role, the department I was in was relocated to the USA and I was given the choice of where I wanted to move to in the company. I had heard there was an environmental safety department and as I had been interested in environmental science during university studies, I decided to give it a go. I have been there ever since.

What did you want to be when you were 11?

When I was 11 I wanted to be vet, I think I was heavily influenced by a television programme at the time that was about a vet! As I went through secondary school I had a really good biology teacher who made the subject really interesting and that fuelled my desire to work in science. In addition to that my dad was a scientist which with hindsight probably also influence me in some way.

I also realised that to be a vet I would need very good grades as school and knew I probably wasn't going to achieve what I would need so I started looking around at other things. I had various career ambitions after that - forensic scientist, pathologist, geneticist - really any kind of scientist would have done!

What do you like to do in your spare time?

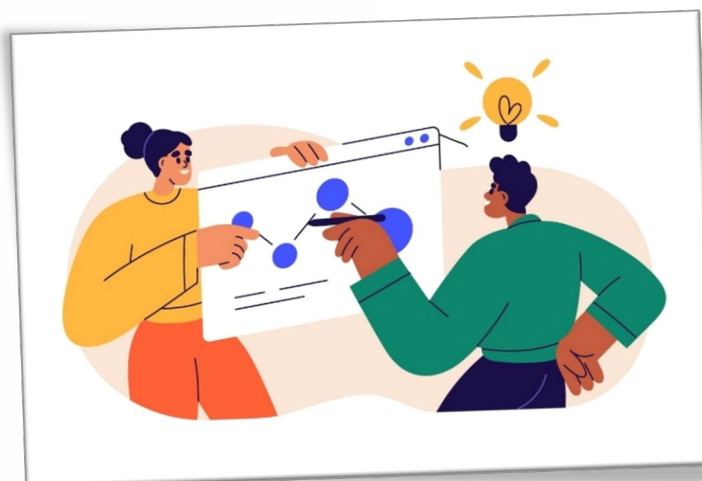
I love playing netball! I wasn't really that interested in school but started playing once I started work and have played ever since. I am now part of team that I helped to set up and we play regularly in a local league. It's a great way to get some exercise and meet new people. I also love reading and gardening.

I am very proud of my little garden and I think my love of the environment comes into that. I try to plant lots of things to attract bees and other wildlife and also grow a few vegetables. I hate it when see gardens which have been paved over or had artificial grass put down! I would love to have an allotment but I don't think I really have the time at the moment to dedicate to it.

What is your top tip for a young person who would like a job like yours?

My role is quite specialist and there are no clear pathways to get there. As a minimum requirement you need a degree in either chemistry, biology or environmental science.

A good place to get practical lab based experience is to work with a contract laboratory organisation, this gives a foundation in the technical aspects. These companies often to the routine laboratory testing for large companies. There is a big move these days to computational methods to model and predict how a chemical will behave in the environment so any skills and experience you can gain in this will definitely not be wasted.



Octavia Brayley

PhD Researcher
University of Birmingham

Describe your organisation in two sentences.

The University of Birmingham is a research-intensive Russell Group institution, with over 28,000 students. Among its staff and alumni are 10 Nobel Laureates.

Describe your role in two sentences:

I am a Biological Sciences Ph.D. student at the University of Birmingham. My research involves utilising various experimental techniques, such as soil sampling and DNA sequencing, to investigate the effects of an invasive species of insect in Antarctica, as well as trying to understand how this insect is able to survive such extreme conditions and how climate change might impact its distribution in the future.

What do you do in a typical day?

I don't really have a typical day in my job, which is something I love as I never quite know what's going to happen! I have only recently started my Ph.D. so at the moment, most of my day is filled with a lot of reading so I can start planning my project and understanding the current research in my area. I often have meetings with my supervisors to discuss my research plans and I always make time during the day to go and grab a coffee with friends. In a few months, my days will be busy with lab work, analysing data, and writing scientific papers to be published.

What do you love about your job?

I get to combine my love for research and teaching into one job and every day is exciting and interesting. My Ph.D. research is a totally new area of investigation, so nobody else in the world is studying what I am, which is pretty cool! This also means I don't know exactly what I am going to discover, which makes my job super exciting.

Through my job, I get to travel to scientific meetings and conferences around the world which is so fun to meet other scientists and present my work to them. I will also be going to Antarctica in 2024, which will be an incredible experience. I also get to give presentations to students at schools around the country which is so rewarding and I love knowing that I might have inspired someone to get involved with science and biology.

How did you get into your current role?

Although I always wanted to be a marine biologist when I was younger, my love for science disappeared when I started secondary school. So, I only took combined science at GCSE. David Attenborough's series on Africa was released at a similar time to me completing my GCSEs, and it was this programme that made me realise I wanted to study science after all!

I studied Biology, Chemistry, and Geography for my A-Levels (I also completed an Extended Project Qualification), and this was tough as I was behind with my scientific knowledge. I also don't do very well in exams, but I put a lot of work into my subjects and got the grades I wanted. I then went on to complete two degrees at the University of Bristol; a bachelor's in Zoology, and a master's in Biological Sciences.

I knew by this stage that I was passionate about teaching and research so I decided I wanted to do a Ph.D. which would help me get a job as a researcher and lecturer in the future. When I was at college completing my A-Levels, I completed an EPQ on Antarctic marine biology, and this sparked an interest in this area of research for me. I, therefore, began applying for PhDs in this subject area and after three years of trying, with about 30 rejections, I finally got funding for my current project.



This goes to show that even at a high level in academia and education, people often have to deal with failure, so never give up on your dreams. If you really want to do something, keep going and you will get there!

What did you want to be when you were 11?

I wanted to be a marine biologist! I was obsessed with dolphins and whales and used to watch all of David Attenborough's documentaries which really inspired me to get involved with science and research.

What do you like to do in your spare time?

In my spare time, I get involved with the dance society at university- ballet is my favourite style. I also like to spend time outside and I enjoy going for walks. I like to keep fit and go to the gym a few times each week. I am also a part-time science tutor and I teach GCSE and A-Level Biology to students. I have recently started volunteering for an environmental media organisation and I help with their social media presence and website articles.

What is your top tip for a young person who would like a job like yours?

If you don't ask, you don't get. Email, email, email! Many of my previous work experience placements have been offered to me because I emailed lots of people. So if you're interested in an organisation, a company, or a scientist, send them an email asking them what they might have available. You never know what opportunities you can get if you ask the question.



Fiona Bunn

PhD Researcher
University of Edinburgh

**Describe your organisation in two sentences.**

A university with a variety of research interests.

Describe your role in two sentences:

I am researching ways to recover a group of critical metals that are important for "green technologies" from waste using the amazing capabilities of bacteria and biology. These metals are used in technologies such as electric cars, smartphones and wind turbines, so demand will be rising dramatically in the future and a "circular economy" for these metals (the rare earth elements) will be increasingly important.

What do you do in a typical day?

My days are generally filled with some reading of the scientific literature, planning experiments, meeting with my supervisors and the lab group and doing lab work and analysing experimental data. I also have periods where I need to write up my work and make presentations.

What do you love about your job?

I love that I get to follow my interests and that I have the opportunity to contribute new innovations to science and society. I enjoy interacting with other scientists who are motivated to contribute to solutions for making our future more "green" and improving sustainability.

How did you get into your current role?

I studied Biology, Chemistry, Maths and Further Maths at A-level, then completed an undergraduate degree in Natural Sciences at The University of Cambridge, specialising in Biochemistry. I then moved to Edinburgh for an MSc in Synthetic Biology and Biotechnology and stayed on for a PhD in a similar field.

What did you want to be when you were 11?

I didn't know what I wanted to be when I was 11, but I was interested in science, and thought I would like to do something to help the world. I also love the outdoors, so at one stage I wanted to be a Mountain Rescue worker!

What do you like to do in your spare time?

I love running as it helps me to relax, socialise and stay fit! I get to compete all over the world, and also explore my local area. I also enjoy tutoring school students in science subjects as it is really rewarding to meet so many motivated students and help them achieve their potential.

What is your top tip for a young person who would like a job like yours?

Always ask questions, even if you think they might be stupid, as this helps you really understand and learn. A scientist's job is to ask questions and then try to discover the answers, and this is something you can practise from any age!

Tariq Umar

**Lecturer in Construction Project Management
University of the West of England**



Describe your organisation in two sentences.

The University of the West of England (UWE) is a partnership university, delivering learning teaching and assessment; research; enterprise and innovation and public engagement activities.

It has existed as a publicly funded university since 1992. It is the largest provider of Higher Education in the South West of England with around 30,000 students and 3,500 staff, approximately 2000 of which are directly involved in teaching and research.

Describe your role in two sentences:

I am a lecturer in Construction Project Management where in I teach undergraduate and postgraduate students and conduct research in the area of Engineering Sustainability, Climate Change, Renewable Energy, and Waste and Resource Management.

What do you do in a typical day?

Usually, my working day starts by reporting to my workplace at 8:30 am. However, each day includes different activities related to teaching, research and meetings. Teaching normally takes place in the classroom, but laboratory experiments are conducted in the relevant laboratory. Apart from regular class hours, each day has specific hours designated for office hours and advising. This time is for the students if they want to see me in relation to academic queries or they want academic advice related to their course or programme. Similarly, I make sure that I have at least three hours for my research-related activities.

Research activities include meeting with collaborators, conducting laboratory experiments to obtain results, reviewing literature, writing research proposals and papers, and revising research papers based on the comments received from the reviewers and editors.

My current role also requires me to work on a number of committees, either as a committee member or chair, meaning I need to attend those meetings. As an approved mentor for the Institution of Civil Engineers (ICE), I need to spare some time to review the progress of the graduate engineers who are working towards membership.

What do you love about your job?

Academic roles in universities are usually complex and challenging in nature. Students being human are gifted with different levels of abilities, so some students may pick things easily and some of them will struggle. When it comes to teaching and learning, each student becomes important to me as I need to ensure that they get the best learning experience and complete their studies in the required period of time.

Similarly, I do want to mention research as one of the challenging aspects of my current role. The civil engineering and construction management disciplines are advancing, but this advancement is quite slow when compared to other branches of engineering, which can restrict research opportunities. I therefore need to target key areas where there is a potential for research and then find gaps in knowledge to focus on for that research.

Active research collaborations with researchers around the world including the United Kingdom, United States, South Africa, Oman and India have helped me overcome the challenges associated with the research. I love both aspects, teaching and research of my job because it help me to develop new construction managers and solve real world problems, contributing to the society and gaining personal satisfaction.

How did you get into your current role?

Engineers have a key role in facilitating the comfort of life of mankind through their engineering projects and innovation. I developed a keen interest in engineering, especially civil engineering, when I was in secondary school. I was always inspired by engineers constructing roads and buildings and used to make models of buildings and houses out of empty cartons. At that time I began to seriously consider pursuing further study in civil engineering.

I started my career in 2003 as a Junior Engineer in a local municipality in Pakistan having completed a Higher Diploma in Civil Engineering. During this job I was able to complete a Bachelor (Hons) degree in Civil Engineering in 2008. I then moved to London where I completed a Masters in Civil Engineering at the University of East London in 2009. At this time I also worked as a Research Assistant in the Soil Structure Interaction Group at the university, which allowed me to polish my research skills.

I then returned to Pakistan and joined Cantonment Board Walton (a local municipal organisation) as Senior Engineer. Two years later (in 2012) I moved to the Sultanate of Oman and worked as a Lecturer in Civil Engineering and Construction Management in a private higher education institution for eight years. In September 2020, I returned to the UK and joined my current employer. I was awarded a PhD in Construction Management from London South Bank University in 2019.

What did you want to be when you were 11?

I love Civil Engineering from my primary school age. I used to create houses and bridges model from empty carton. When I see construction workers in a building and or road projects, I was used to think how they change the natural environment to a built environment - making the earth a good place to live.

What do you like to do in your spare time?

I love to take my children to the local park where I play with them and visit the ice cream van! I also write in my free time.

What is your top tip for a young person who would like a job like yours?

There are great opportunities in all areas of STEM, Civil Engineers do amazing jobs and execute complex engineering projects around the world. Civil Engineering is a profession where you can have a chance to address key issues such as climate change and global warming and contribute to improving the quality of life.

Do some research to find out what it is all about. If you are interested, pursue a degree and become a professional engineer with the Institution of Civil Engineers. Honestly, you will love your career.



Rachel McEvan

Environmental Manager WSP



Describe your organisation in two sentences.

One of the world's leading engineering professional services consultancies, employing engineers, technicians, scientists, planners, surveyors, environmental specialists, as well as other design and construction management professionals.

With over 7,000 employees in the UK, WSP designs include commercial, residential, government buildings, transportation projects, energy, maritime and flood prevention projects and covers all project phases including initial development, and planning studies, design, construction, commissioning, and maintenance phases.

Describe your role in two sentences:

My role is to manage and co-ordinate a range of environmental professionals (including landscape architects, ecologists, archaeologists, geologists and hydrologists) to consider and report on the environmental impacts of proposed developments, such as new/improved roads, rail lines and stations, hospitals, electricity lines and substations, wind farms, etc. I provide leadership, support and advice.

What do you do in a typical day?

I don't have a typical day! My job means each day is different as I work with so many people across many projects that my role needs me to be flexible, organised, and analytical to keep every project on track with everyone doing what they need to do.

What do you love about your job?

I love the variety and the problem solving nature of my role as each day presents questions that require working together with a group of environmental specialists to resolve. It is really great to be involved in a team and to see how sharing thoughts and ideas helps in understanding the potential environmental consequences of new development, for example, and then coming up with ways in which negative impacts can be avoided or reduced.

I enjoy the feeling that what I do does make a difference and helps to shape projects such that they have less environmental impact or provide opportunities for improving the environment for people and for wildlife.

How did you get into your current role?

I studied sciences at school and then went to college and started a job working as a laboratory analyst. I knew that I wanted to do something more related to the environment and so went to university taking an Environmental Studies course. After that, I got a job as an environmental consultant starting my career and learning more about the different disciplines involved in environment impact assessment work. I also did some voluntary work with the National Trust for Scotland.

What did you want to be when you were 11?

When I was 11 I really knew what I wanted to be, but I was always interested in being outdoors and in exploring places around me, with a keen interest in science and nature.

What do you like to do in your spare time?

In my spare time I enjoy walks with my 2 year old whippet called Seb, including with a local whippet friendship group. I enjoy reading and learning about new development in environmental impact assessment. I also love going out to different restaurants trying out new food when I get the opportunity.

What is your top tip for a young person who would like a job like yours?

My advice would be to enjoy what you do, work hard to get relevant qualifications and enjoy learning together with others, taking other peoples views into consideration and solving problems together.



Activity: Which job is this?

Print and cut out the two tables, dividing the job title from its description, mix them up and distribute the collection to students, challenging them to identify which job description matches the job title.

Senior Marine Mammal Consultant APEM Group	My job involves designing plans to help protect marine mammals from any offshore activities. I write reviews on marine mammals and can be in the field conducting surveys when needed.
Town Planning Consultant Be First	My job involves managing competing demands for land and making sure that all new developments follow relevant environmental and sustainability policies.
Civil Engineer Binnies	I work as part of the flooding team where we work to protect us from flooding and maintain the natural environment.
Analytical Scientist Centre for Process Innovation	A tremendous amount of analytical testing is required to support a product from discovery / development and clinical trials to manufacturing and marketing.
Forester DAERA Forest Service NI	I manage forests in a way that they will produce benefits to people and protect the environment and the economy for future generations
Research Assistant Earthwatch Europe	My role is focussed on project delivery across the UK. The role is a mixture of practical conservation work, environmental education, and research.
Chemistry Engineer EDF Energy	Manage the reactor chemistry of an advanced gas cooled nuclear reactor.

Natural England Sustainable Development Lead Advisor	<p>I help to conserve nature and create more green spaces for people and wildlife.</p>
Geo-Environmental Consultant Ramboll	<p>I am primarily involved with investigation and remediation of contaminated land.</p>
Development Verification Engineer Rolls-Royce SMR Ltd	<p>My role involves supporting the design of a novel new nuclear power station and ensuring we are designing, manufacturing, and operating the facility correctly.</p>
Digital Power Account Manager Schneider Electric	<p>I am in Technical Sales, working typically with end users in areas like Real Estate, Hospitals and Universities, to help them with energy monitoring and power management.</p>
Company Director / Quality Engineer STEM Quality Limited	<p>I collaborate with chemists, scientists, and other engineers to help develop or improve materials that are more sustainable, easier to reuse or recycle which are used in the car industry.</p>
Environmental Safety Scientist Unilever	<p>My role involves ensuring the products we make and are used every day around the world are safe for the environment.</p>
PhD Researcher University of Birmingham	<p>My research involves utilising various experimental techniques, such as soil sampling and DNA sequencing, to investigate the effects of an invasive species of insect in Antarctica.</p>
Environmental Manager WSP	<p>My role is to manage and co-ordinate a range of environmental professionals (including landscape architects, ecologists, archaeologists, geologists, and hydrologists) to consider and report on the environmental impacts.</p>

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www.stem.org.uk

