

# Sedgwick Club Careers Event 2023

Tuesday 21<sup>st</sup> November, 17:00–19:00

*Common room: in-person representatives*

*Harker 1: virtual talks*



## Contents:

### In-person

**AtkinsRéalis** – Tony Bowerman and Charlotte Newton

**BAS** – Amy King and Isobel Rowell

**BGS** – Liam Holland

**Careers Service** – Katie Heath

**CGL** – Anna Ormond

**ERM** – Lizzie Knight and Sarah Lawford

**Güralp** – Chris Potts

**PhD students** – James Craig, Peter Methley, and Norbert Toth

**PLOS One** – Miquel Vall-Ilosera Camps

**Zeiss** – Rich Taylor

### Virtual

**17:15** MET Office – Eloise Matthews

**17:30** Satarla – Matthew Grimshaw

**17:45** BHP – Libby Sharman

**18:15** Minviro – Fin Bibby and Nicola Wright McKenzie



## **Tony Bowerman and Charlotte Newton**

*What does your company do?*

AtkinsRéalis is a world-leading global engineering, design, and project management consultancy. We have over 30,000 staff around the world and work across the full lifecycle of a project to deliver better solutions for our planet and its people. We work across all major markets including transport, water, energy (including low carbon, nuclear and offshore), building & cities and aviation. As one of the UK's leading ground engineering consultancies, AtkinsRéalis offers a comprehensive service in ground technology ranging from investigations, designs, construction support, expert witness, and asset management. With more than 300 professionals in our Ground Engineering & Tunnelling Practice based in the UK, AtkinsRéalis' geotechnical reputation is built on the skills, excellence, and commitment of our people in all aspects of geotechnical engineering.

*What is your role and how did you get into it?*

**Charlotte:** I'm an Engineering Geologist within AtkinsRéalis, I am typically concerned with the engineering characteristics of the ground for transportation and infrastructure projects in the UK. Day-to-day tasks include preparing desk studies, creating ground investigation specifications, and then supervising the works on site, interpreting data, and undertaking geotechnical designs for the proposed scheme. My career began when I completed the integrated masters in Geology at the University of Southampton. Through my course I discovered a passion for determining ground models for specific sites and utilising geotechnical engineering principles to design proposed structures and remediate natural earth defects. I initially worked as a Geo-Environmental Engineer at two smaller consultancies before starting an MSc in Geotechnical Engineering which broadened my technical knowledge and led to me joining AtkinsRéalis in 2021.

**Tony:** I'm a Senior Geotechnical Engineer and have worked in engineering for over 7 years, mostly in design consultancy. Over that time, I've had the opportunity to work across the full lifecycle of a project, from developing scheme proposals, making calculations for designs, supervising construction works and maintaining the assets that are built. I have mostly focused on the Transportation and Water sectors from small junction improvements to large scale proposed reservoirs. I kind of stumbled into geotechnical

engineering as it felt more conceptual, and less maths based like structural engineer. You have the challenge of making your designs fit the ground conditions you are dealt for your project and working with a range of specialists, including engineering geologists and geophysicists appealed to me. My role has really evolved other time and that is the joy of our industry, there is so much to do. I'm now involved in geotechnical asset management for local councils and national operators, currently I help to maintain the embankments and cuttings around the M25 (around 3,600 assets in total!).

*What roles are there relevant to Earth scientists?*

In AtkinsRéalis roles relevant earth scientists range from Engineering Geologists, Geophysicists, Ground Modellers, Geotechnical Engineers, Tunnel Engineers, Geo-environmental/Environmental Scientists, Hydrogeologists and Contaminated Land Consultants

*Do you have graduate schemes and/or internships for current undergraduates?*

Yes, we do, summer internships and graduate schemes are available, links below:

[Ground Engineering and Tunnelling Graduate Scheme job in Nationwide](#) | AtkinsRéalis Early Careers (atkinsrealis.com) – Deadline for applications is **4th December** 2023. The locations are based all around the UK, including Cambridge.

(<https://careers.atkinsrealis.com/uk-early-careers/job/ground-engineering-and-tunnelling-placement-scheme-2024-in-nationwide-jid-32899>).

[Ground Engineering and Tunnelling Placement Scheme 2024 job in Nationwide](#) | AtkinsRéalis Early Careers (atkinsrealis.com) – Deadline for applications is **7th December** 2023. The locations are based all around the UK, including Cambridge.

(<https://careers.atkinsrealis.com/uk-early-careers/job/ground-engineering-and-tunnelling-graduate-scheme-in-nationwide-jid-32285>).



# British Antarctic Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL

## Amy King and Isobel Rowell

*What does your organisation do?*

The British Antarctic Survey (BAS) delivers and enables world-leading interdisciplinary research in the Polar Regions. Its skilled science and support staff based in Cambridge, Antarctica and the Arctic, work together to deliver research that uses the Polar Regions to advance our understanding of Earth and our impact on it.

BAS is a component of the Natural Environment Research Council (NERC). NERC is part of UK Research and Innovation. While research focussed, a large number of staff at BAS are in the many areas required to support science, alongside the scientists themselves. This includes teams in operations and logistics, engineering, mapping, data management, communications and outreach, finance and HR.

*What is your role and how did you get into it?*

Both Isobel and Amy are Postdoctoral Researchers (PDRAs) in the ice core gas analysis laboratory. These are research positions which followed on from PhDs, Isobel at the University of Cambridge and Amy split between the University and the British Antarctic Survey. Isobel and Amy specialise in measuring the concentration and isotopic composition of greenhouse gases in ice cores, which are trapped in ancient air bubbles entombed in ice sheets and extracted by drilling out cores. These bubbles are a unique palaeoclimate archive, since they are the only direct record of atmospheric gas concentrations preceding human records. Ice core gas records, which extend back to over 800,000 years ago, have been pivotal in our understanding of the effect of greenhouse gases on our current and future climate. There is still much to learn from these records, and the lab is developing novel techniques to measure more gases and at higher resolution in order to improve these records, and our future predictions.

*What roles are there relevant to Earth scientists?*

Scientific research starting as a PDRA which may lead to more senior research roles; laboratory technicians and laboratory managers, data managers, mapping and GIS roles, science communication roles.

*Do you have graduate schemes and/or internships for current undergraduates?*

BAS offers projects each year to University of Cambridge Earth Science Part III students to undertake their dissertation project at BAS. There have been 1-2 students in the ice core team specifically for the last 3 years. These can either come from a pre-set list of projects offered to the students, or the students can reach out to potential supervisors to discuss project ideas in advance.

If students are interested in further study, BAS hosts a cohort of PhD students working across the polar sciences. Each PhD student will have a twin University, who awards their degree, which may be Cambridge or further afield depending on the project and supervisors involved. The majority of these will be managed by Doctoral Training Programmes (DTPs), and available projects are posted online each January for application.



# British Geological Survey

## Liam Holland

*What does your company do?*

The British Geological Survey is a world leading geological survey and global geoscience organisation. We work all over the UK and overseas doing research into all things geoscience, from mapping to geomicrobiology.

*What is your role?*

I am a Geoscience Technician at the BGS, which is as broad as it sounds! My role mostly involves field sampling and measurements, lab tests, and data analysis. But I also work with teams across the BGS helping out with satellite mapping programming, etc.

*What roles are there relevant to Earth scientists?*

Earth sciences gives you a perfect grounding to work at the BGS, earth sciences can lead you into geophysics, mapping, geohazards, decarbonisation and much more. The BGS has a very wide range of roles, and Earth Sciences are involved in the vast majority.

*Do you have graduate schemes and/or internships for current undergraduates?*

The BGS doesn't offer specific graduate schemes, but on the job training is a huge part of the BGS for staff of all levels. We host several PhD students, and offer summer placements for undergraduates.



## **Libby Sharman**

*What does your company do?*

BHP Xplor is a global accelerator program targeting innovative, early-stage mineral exploration companies to find the critical resources necessary to drive the energy transition. It sits within BHP, is the world's largest integrated mining company, mining iron ore and higher-quality metallurgical coal preferred by our steelmaking customers, copper which is used in electrification, nickel which is used in electric cars and potash to make food production and land use more efficient and more sustainable. Our purpose is to bring people and resources together to build a better world.

*What is your role and how did you get into it*

I am the Technical Lead for the BHP Xplor program, meaning I have a geological duty of care for the companies we partner with through the program, and ensuring the technical rigour of our investment decisions. I joined Xplor from the Metals Exploration team where I had spent 5 years informing global strategy through mineral systems development, prospectivity mapping and third party assessment. Prior to that, and following completion of my PhD, I worked for a series of exploration companies as well as in community engagement and stakeholder relations.

*What roles are there relevant to Earth scientists?*

There are numerous roles relevant to Earth Scientists within BHP including working with our Exploration teams globally to find the deposits of the future, working at our mine sites to optimise sustainable resource extraction, driving cutting edge research with our Resource Centre of Excellence, informing investment decisions and supporting environmental work across our sites, among many options.

*Do you have graduate schemes and/or internships for current undergraduates?*

We do have several global graduate student programs, although none UK specific. More information is available here - <https://www.bhp.com/careers/graduate-student-programs>



## **Anna Ormond**

*What does your company do?*

CGL are an environmental and geotechnical consultancy who support our clients across the country to manage 'ground risks'. We provide ground-related solutions for a wide range of projects, including property development and house building, as well as the energy and infrastructure sector. We often undertake ground investigations to support design solutions for contaminated land, remediation, ground engineering and temporary works. We have been involved in a wide range of projects, including HS2, Fort Augustus to Skye OHL scheme, Shepperton Studios expansion and Barking Riverside.

*What is your role and how did you get into it?*

I am a Senior Engineer, working in our head office in Godalming. I started CGL 4 years ago as a Graduate Engineer, and have been promoted to my current position. As a Senior Engineer, the work I do includes managing projects (including the financial aspects), conducting site work and writing reports.

*What roles are there relevant to Earth scientists?*

I graduated from Cambridge in 2019 with my MSci in Earth Sciences, and started working for CGL in September. An Earth Sciences degree is sufficient for anyone looking to take a technical role within CGL.

*Do you have graduate schemes and/or internships for current undergraduates?*

We have a graduate training programme which runs annually for all new Graduate Engineers. Internships /work experience is run on a more ad-hoc basis to suit those who are interested.





## **Lizzie Knight and Sarah Lawford**

*What does your company do?*

ERM is the world's leading sustainability consultancy with approximately 6000 employees across 40 countries. In 2021, Element Energy and E4tech joined forces with ERM to form a new Energy Solutions team, specialising in the robust and intelligent analysis of low and zero carbon energy.

Our work involves innovative new concepts and is fundamental to the shift to a low carbon future and the mitigation of climate change. We help both public and private sector organisations develop their decarbonisation strategies, technologies, policies, and projects through evidence-based investigations. We also work with a wide range of clients and partners to demonstrate and commercialise new technologies to enable the transition.

We are around 150 consultants who are all passionate about energy transitions and our teams span all areas of low carbon energy:

- Transport
- Buildings
- Hydrogen and fuel cells
- Chemicals and fuel cells
- Industry and CCUS
- Energy networks
- Policy
- Sustainability and resources
- Smart energy systems
- Funded Project Management

We pride ourselves on the strength of our analysis, and we work closely with our clients, aiming to exceed their expectations and solve the challenges of climate change together.

*What is your role and how did you get into it?*

### **Lizzie**

Role: I started at ERM straight after finishing my PhD and have been here for about 6 weeks now, so I am still finding my feet! My time is split between the Low Carbon Fuels + Chemicals team, and the Policy team; so far, my projects have involved assessing the eligibility of low-carbon fuels (like bio-methanol) under the net zero policies of different countries. Some vehicles or industrial processes will be difficult to make fully electric, so it's important that we develop sustainable fuels and supply chains for these sectors. Projects can last between 1-6 months, and most people have between 2-5 projects on the go at once. Day to day, I have catch-up meetings for my projects (some including the clients), I work on my projects (which can involve data analysis, making presentations and reports, or building databases), and I read a lot to make sure I am up to date with all the latest policy and technology developments.

Background: I studied NatSci undergrad at Fitz, specialising in Earth Sciences. In my masters year, I did mostly Geophysics and Climate modules. I then started my PhD, still in the Earth Sciences department, working with Alex Copley on active tectonics and mountain building. During my PhD, I did an internship in the UK Parliament and also worked on a project with the Cambridgeshire County Council, looking at heat networks.

### **Hannah**

Role: At ERM, I work in the Industrial Decarbonisation team. In our team we work on a wide range of problems around how to best decarbonise heavy industries for example the iron and steel sector (cars, bridges etc.) and cement sector (buildings, roads etc.). An example of a project I have worked on is one where I used publicly available literature to map the geological CO<sub>2</sub> storage potential across Europe ([Unlocking Europe's CO<sub>2</sub> Storage Potential](https://www.catf.us/resource/unlocking-europes-co2-storage-potential/) – Clean Air Task Force (catf.us) (<https://www.catf.us/resource/unlocking-europes-co2-storage-potential/>)). Day-to-day, my work typically involves data analysis using QGIS and Excel as well as preparing presentations for the wide range of clients we have.

Background: I studied Geophysics at Imperial College London before doing a PhD at Cambridge in the Earth Science department. I joined ERM after finishing my PhD, just over a year ago.

## **Sarah**

Role: My work is split across two teams within ERM - Transport and Funded Project Management. The transport team work on a wide range of projects in the UK, France, and beyond in sectors such as batteries, charging, light and heavy duty vehicles, maritime and aviation. Examples of projects are working with a company to decarbonise their fleet or advising a local authority or government on policy decisions. My work typically involves report writing, data analysis, engaging with stakeholders and preparing presentations. The Funded Project Management team coordinates a number of European-wide technology demonstration projects and have a particular speciality in the hydrogen mobility sector. These projects usually involve many partner organisations and typically last 3-7 years. The coordinators manage the project, liaising between partners and the funding body, solving problems when they arise and ensuring agreements are kept on the outcomes of the project for a successful delivery. Day to day this involves meetings with partners and the funding body, writing official documents (grant agreements, reports, etc.) and chairing regular meetings of partners.

Background: I studied NatSci at Catz, specialising in Earth Sciences. I joined ERM just over a year ago after finishing my masters.

*What roles are there relevant to Earth scientists?*

All roles, depending on your interest – see [Graduate and entry-level careers](https://www.erm.com/careers/graduate-and-entry-level/) at ERM for more details (<https://www.erm.com/careers/graduate-and-entry-level/>).

*Do you have graduate schemes and/or internships for current undergraduates?*

We do not run a graduate scheme or offer internships currently but do offer a comprehensive induction period for the first few weeks of joining with us and provide a buddy support system for the first six months as well as ongoing training programmes and monitoring provided by ERM internally.



## **Chris Potts and Will Reis**

*What does your company do?*

Guralp Systems (GSL) designs and manufactures instruments that measure seismic events – for example earthquakes and nuclear weapons tests. We provide these to Universities and research organisations trying to understand the way the earth works, to government bodies trying to predict or give warning of dangerous earthquakes, and military and multinational organisations (such as the UN) who try to monitor nuclear weapons tests.

*What is your role and how did you get into it?*

**Chris:** I am the Chair of the company – joined in 2014 as non-executive Chair, stepped in as the chief executive as well as Chair from 2015 until 2020, then became the non-executive Chair.

**Will:** I am the Global Sales Manager. This means I interact with clients and distributors from all over the world to determine the best technical and commercial solution for their application. I often travel overseas to meet clients to discuss projects that can take months or years to plan and obtain budgets for. Having started as an assistant for projects in Northern and Central Asia, I now cover all of Asia Pacific with a few other key countries including the UK as well as responsibility for larger strategic projects across the world. I got into the role through an email flyer sent to the Department at Cambridge looking for potential candidates.

*What roles are there relevant to Earth scientists?*

**Chris:** We employ earth scientists in market facing roles – working with customers and helping internal teams to meet customer needs and requirements.

**Will:** Earth Scientists are especially useful for bridging the gap between clients in industry/academia and the engineering/production team in Güralp. We have the necessary knowledge to have a general understanding of a huge variety of geotechnical concepts and translate this into the best and most competitive solutions for clients.

*Do you have graduate schemes and/or internships for current undergraduates?*

**Chris:** We have recruited graduates directly from first and higher degrees several times in the last 5 years.

**Will:** Communication and people skills are the single most important factor in being successful. I have hired new graduates (and would again) with no background in Earth Sciences but with excellent communication skills that can bridge language and cultural barriers. Having both the Earth Science background and these qualities would make a very strong candidate.



## Eloise Matthews

*What does your organisation do?*

The Met Office is a world-leading provider of weather and climate services, with our ultimate aim being to guide decision-making to help people stay safe and thrive in both their day-to-day lives and under a changing climate. We have a huge variety of teams that develop and incorporate weather forecasts and climate projections into applications such as international climate services; defence planning; warnings for severe weather and attribution to climate change.

*What is your role and how did you get into it?*

I'm a Deployable Project Scientist, a role I applied to shortly after graduation. I had a friendly interview with a pre-task and both technical and social questions. It's an early career role, and I was recruited as part of a team, which has been really nice. The idea of the role is that we get "deployed" into different teams around the office for ~6 months at a time to work on a certain project, with the aim being for us to find where in the office we want to settle permanently.

*What roles are there relevant to Earth scientists?*

There are numerous roles in both science research and application, in sectors such as climate projections, oceanography, clouds, etc. Climate science knowledge from Earth Sciences sets you up well for these as well as more weather-focused roles. A lot of positions just require a physical sciences background and have a lot of scope for training on the job. Something I really like is that there is the opportunity to do a part-time PhD at an affiliated university if you want to continue some other Earth Sciences/Environmental research!

*Do you have graduate schemes and/or internships for current undergraduates?*

The graduate scheme provides a broad introduction to all sectors of the office, I think applications are open in Autumn time (next year for 2025). There are lots of graduate-level roles though if you want to start more specific, such as Foundation Scientist positions. Hopefully the summer placements scheme will be up and running again for 2024 after a hiatus for 2023 (applications would open in winter).

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## MOTT MACDONALD

*What does your company/institute do?*

Mott MacDonald are one of the largest employee-owned global engineering consultancies. We work in a variety of sectors including buildings and infrastructure, energy, water, environment, and transportation amongst others.

Many projects draw expertise from different teams and use this experience to try and find sustainable solutions to problems. Much of the work done at Mott MacDonald includes detailed modelling and thoughts about the resilience of infrastructure and designs under different climate change scenarios. Mott MacDonald works to find solutions to everyday problems, including understanding water resources for now and the future and considering environmental impacts of large infrastructure problems such as HS2.

*What is your role and how did you get into it?*

Stella: I am a graduate hydrogeologist in the water resources and flooding team, based in the Cambridge office. I graduated in 2023 with a BA and MSci in Natural Sciences, specialising in Earth Sciences. In my few months at Mott MacDonald so far, I've worked on a groundwater and ground gas risk assessment for a new sewage treatment works, work on ArcGIS to assist groundwater modelling, comparing different possible climate change scenarios and their importance in new infrastructure, and site work monitoring water quality from a borehole.

During my degree I had done no hydrogeology at all. However, the general overview you get from the Cambridge Earth Sciences course can be applied to many different disciplines. Mott MacDonald look for people who have good communication skills, a good attitude to learning and problem solving and the flexibility to work with different people. Quantitative skills and the ability to work to deadlines are also important.

*What roles are there relevant to earth scientists?*

Mott MacDonald have a yearly graduate scheme intake for a variety of disciplines including earth sciences (geotechnical/geology, geo-environmental, water resources and general environmental disciplines). The applications for September 2024 are usually due around this time of the year so I would recommend having a look at our career opportunities on [www.mottmac.com/careers](http://www.mottmac.com/careers).

The Mott MacDonald offices have a strong graduate presence and an Early Career Professionals team who organise outreach, help with obtaining chartership and regular social activities. The Cambridge office also has many different sports teams and other groups, such as D&D and board games groups.

In terms of career development, graduates working for Motts will have the opportunity to learn, develop and apply skills and behaviours to perform at their best, with access to formal and informal development programmes and support to continue with relevant external professional certifications. When you're ready to progress into a leadership role, Motts provide award-winning leadership development programmes to help you continuously improve and transition into an industry expert.





## **Miquel Vall-Ilosera Camps**

*What does your company do?*

PLOS is a nonprofit, Open Access publisher empowering researchers to accelerate progress in science and medicine by leading a transformation in research communication. PLOS ONE is a peer-reviewed open access mega journal working to advance science by making all rigorous research accessible without barriers.

*What is your role and how did you get into it?*

I'm a Senior Staff Editor in PLOS ONE Life Science Division. I oversee the peer review process of manuscripts submitted to PLOS ONE and provide editorial assistance to authors, reviewers and academic editors.

I joined PLOS ONE following a five year period of postdoctoral positions after I finished my PhD in Ecology.

*What roles are there relevant to Earth scientists?*

PLOS ONE employs earth scientists in editorial roles in the Life Science and Physical Science and Engineering divisions.

*Do you have graduate schemes and/or internships for current undergraduates?*

At this time we do not have a scheme or internships for undergraduates.



## **Rich Taylor**

*What does your company do?*

ZEISS is a manufacturer of light, electron and X-ray microscopes. It is part of the Carl Zeiss Foundation, an organisation dedicated to the advancement of science.

*What is your role and how did you get into it?*

My role at ZEISS is in a small group called Business Sectors. Each member of our team is a subject matter expert, with me covering Geoscience in Academia. I found out about this role after supervising a PhD student (at ESC) who was sponsored by ZEISS. Its not what you know...

*What roles are there relevant to Earth scientists?*

ZEISS is a very science savvy organisation employing graduates all the way up to PhD level in a range of roles. Everything from running finance teams, sales managers visiting customers, to R&D benefits from the specialist knowledge of people who have a scientific background across a range of disciplines. ZEISS is a global organisation with over 40,000 employees and multiple offices, so there is great opportunity to travel in various roles.

*Do you have graduate schemes and/or internships for current undergraduates?*

ZEISS maintains opportunities for internships and the sponsorship of students. Some of these are run centrally through the main organisation giving an opportunity to see a range of roles operate, and some are more project focussed with specific teams. These internships tend to be organised on an ad hoc basis depending on the skills of the intern and what they are looking to get out of the opportunity.

Also featuring:



**MINVIRO**



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Risk & ESG Training | Consultancy | Research