Natural History Museum

Candidate pack

Postdoctoral Researcher, NERC LiVS

Full time, fixed term

About Us

The Natural History Museum is a globally recognised centre for scientific research. We care for one of the world's largest and most unique natural history collections, with more than 80 million objects, representing billions of years of history. Our more than 350 scientists are responsible for looking after and growing this collection as well as unlocking its secrets.

We're at a pivotal moment in our history. We have huge aspirations to extend our global reputation for cutting-edge science with a new state-of-the-art research facility at Thames Valley Science Park. This, alongside an ambitious digitisation programme, will open up the collections like never before, revolutionising access to natural history data and facilitating exciting new research endeavours. We're looking for talented people who'll welcome the flexibility, autonomy and opportunities for collaboration we offer. Who'll be motivated to help us achieve our mission of creating advocates for the planet by finding science-based solutions for nature, from nature.

Diversity and inclusion matter to us

We welcome applications from everyone! Diversity, inclusion and the feeling of belonging matters to us. By attracting people from a broad range of backgrounds we can continue to look at the world with fresh eyes and find new ways of doing things. We offer a stimulating and professional working environment. All our staff work to embody our behaviours of being curious, ambitious, pioneering, teaming up, acting with pace and sharing the wonder.

We know we have more to do, but we're committed to making sure that everyone who works here feels valued, respected and that they can thrive.

Thriving at the Museum: the way we work

Our vision is a future where both people and planet thrive. To accomplish this, we're delivering an ambitious strategy by 2031 to create advocates for the planet. To achieve this shared goal requires each of us to behave in ways that help everyone to thrive. We are proud to work at the Museum and have identified the qualities we all need to embody to reach this shared ambition.

We're ambitious. To make a difference on a global scale we have to push the boundaries and be big and bold not only in our thinking but in the goals we set. We act with integrity, but this doesn't mean we're rigid or inflexible.

We drive ourselves and others to be excellent at what we do and identify opportunities to make a difference to the organisation wherever we can.

We're curious. We never stop learning. We ask questions to advance our understanding, skills and professional knowledge and look outwards beyond the organisation to learn from others. We seek out and actively listen to different perspectives and to take time to reflect. We're thoughtful and always receptive to new ideas and ways of working.

We share the wonder. We are captivated by the natural world, proud of our treasures and trusted guardians of our collections. We relish telling stories to inspire others. We're passionate about what we do, sharing our own knowledge and expertise. We're proud of where we work and never take this for granted.

We're pioneering. We're not afraid to try something new. We experiment, embrace complex problems and use good judgment and evidence to innovate and take risks. Always adaptable, we're ready to change our approach.
We don't dwell on setbacks or get preoccupied with problems – we find solutions.

We team up. We respect the expertise of others and recognise that we produce the strongest outcomes when we put the best ideas together. We trust each other, keep things simple and make it easy for others to do the
right thing. We empower and support each other, sharing information, skills and experience so that all of us are equipped to succeed. We never let difficult moments develop into bad working relationships.

We act with pace. We prioritise action, are efficient and always focus our efforts where we know we can make the biggest impact. We don't wait to be told what to do - we take the initiative and deliver on our responsibilities with momentum. We're decisive and once a plan is set, we all get behind it to make it a success.

Science at the Natural History Museum

We employ one of Europe's largest concentrations of earth and life scientists and are home to one of the world's most extensive collections of natural history specimens, an awe-inspiring resource of nature's diversity, both past and present. We have a long-standing international reputation for excellence, innovation, and leadership in collections-informed science. We work across taxonomy, systematics and phylogenetics, biodiversity genomics, evolutionary biology, parasitology, ecology, palaeontology, mineralogy, planetary sciences, and bio/geodiversity informatics, at the forefront of leading research.

To support the realisation of our vision of a future where both people and the planet thrive, we focus our science on solutions from and for nature. With strong and rewarding connections with a wide network of museums, universities, research institutes and governments and non-governmental organisations, we also play a major role in several national and international collaborative projects.

Science Group is organised around major collections, research, laboratories, library facilities and data (including digital activities and informatics). Science also boasts a growing Graduate Centre focused on supporting and training the next generation of scientists. We currently supervise over 120 PhD students linked to UK and international universities.

Science activities and collections are currently distributed across our South Kensington site, which contains state-of-the-art research and collection facilities and at Tring, which holds the bird collections. Our Unlocked programme will deliver a move of 38 million specimens, 28 million of which will be housed in our facility situated at the Thames Valley Science Park near Reading, to improve conditions for our collections, provide new opportunities for scientific research, and unlock the future development of the Museum at South Kensington to engage a growing public audience. The new building will be ready for occupation in 2027, and collections moves are expected to be completed by 2031.

Our research can be seen through nine thematic lenses. These act as catalysts for linking our science across the Museum to identify and address major research challenges and to ensure our work to address the planetary emergency is grounded in solid scientific evidence.

- **Biodiversity change**: gaining insights into the factors driving global change, enabling the formulation of effective conservation policies and practices that protect ecosystems and enhance human well-being.
- **Biodiversity and Health**: understanding how ecosystem health influences human and animal health, ultimately finding and promoting holistic approaches to disease prevention and health improvement.
- **Collections and Culture**: revealing the diverse ideas, cultures, histories, and impacts of our interactions with nature, fostering a deeper appreciation and awareness of biodiversity's significance.
- **Community Science**: empowering individuals and communities to collaborate in research, enhancing their knowledge and agency to drive meaningful environmental action and conservation efforts.
- **Evolution of Life**: understanding the patterns of distribution and interrelationships of organisms throughout Earth's history to reveal how life evolved, enabling solutions for nature and future ecosystem function.

- **Genomics**: understand how genetic variation can lead to differences within and between populations and identify traits that enable organisms to adapt and thrive.
- **Planetary Origins and Evolution**: answering deep questions about the origins and future of our and other planets to understand our current planetary emergency in the broader context of solar system functioning.
- **Resourcing the Green Economy**: integrating knowledge from across our science base, enabling best use of natural resources for human futures while maintaining ecosystem sustainability.
- **UK Nature Recovery**: enabling nature positive recovery of ecosystems in the UK for improved and sustainable biodiversity and natural resource conservation.

Role Summary

The post holder will be a member of a research consortium spanning the Natural History Museum (NHM) and the University of Oxford, working in collaboration with the University of Naples (Italy) as project partner, alongside industry partners. The role involves conducting research within the NERC-funded project ***LiVS: The fate of lithium during magmatic and volcanic processes in volcano-sedimentary systems***. This project seeks to understand an emergent class of soft-rock Li sources known as lithium volcano-sedimentary (LiVS) deposits, including the world's largest known lithium resource in the McDermitt Caldera (USA). These LiVS deposits can potentially capitalise upon extraction and processing technologies that have reduced energy requirements and lower environmental impacts. Recent work has confirmed that LiVS are the result of the explosive eruption of Li-rich magmas followed by redeposition of fragmental material and ash within calderas or extensional basins with subsequent closed hydrological system diagenesis producing Li-rich ore bodies. This grant will contribute to the understanding of the processes by which Li and ligands are transported from the deep magmatic source through eruption to eventually become environmentally available to the various possible mineralogical traps.

Initially, this Postdoctoral position will involve undertaking fieldwork to collect relevant sample material, as well as working with curatorial staff to source appropriate collection materials. The Postdoctoral Researcher will conduct laboratory analyses of both natural material and products of hydrothermal experiments undertaken by the Oxford team, both in the NHM labs and at external facilities. These analyses will aim to understand the processes of Li deposition during magmatic fragmentation and later mobilisation during reactions between fluids and pyroclastic rocks across a range of temperatures. The Postdoctoral Researcher is also expected to contribute to the preparation of applications to seek additionally external analytical support (e.g. synchrotron, advanced isotopic techniques, neutron tomography)

The successful candidate will hold, or be close to completing, a relevant PhD/DPhil, and will have relevant experience in analytical techniques, appropriate modelling and presentation skills (both oral and written). The role will also provide opportunities to supervise PhD and Masters students, as well as to become involved with a range of NHM outreach and engagement activities.

Main tasks and responsibilities

- Design and conduct independent and collaborative research on lithium behaviour in volcano-sedimentary systems
- Carry out detailed petrographic, mineralogical, and geochemical analyses using in-situ (e.g., EPMA, SEM-EDS, LA-ICP-MS, XRD) and bulk-rock techniques
- Develop and apply coding workflows for data processing, quantitative analysis, and visualisation of complex geological datasets
- Integrate field, petrographic, and geochemical datasets to interpret magmatic and eruptive processes
- Undertake fieldwork, including logging volcanic stratigraphy, sampling, and contributing to field campaign planning
- Lead and contribute to the preparation of high-quality scientific publications and reports
- Present research findings at international conferences, workshops, and project meetings
- Collaborate with project partners within the LiVS consortium

What we're looking for

- PhD in Earth Sciences or a closely related discipline
- Demonstrable expertise in mineralogy, geochemistry, and petrology
- Strong analytical skills, with experience in in-situ techniques (e.g., EPMA, SEM-EDS, LA-ICP-MS) and bulk-rock XRD
- Proven experience in fieldwork, particularly in the sampling interpretation of volcanic sequences
- A demonstrable ability to conduct and publish high-quality research.
- Experience in data processing and visualisation using coding (e.g., Python, R), including systematic data handling and archiving.
- Excellent written and oral communication skills in English

Key information

Salary: £43,645 per annum, grade 4

Hours: Full time, 36 hours per week

Contract: Fixed term from 1 September 2026 - 31 August 2029

Due to the nature of this role the work pattern will be 100% on site.

The Museum supports flexible working.

All positions at the Natural History Museum are conditional subject to receipt of:

- Proof that you are legally entitled to work in the UK
- A Basic Disclosure Check from the Disclosures and Barring Service (DBS)
- Satisfactory references covering the last 3 years of your employment or education
- Health clearance

Our benefits

In addition to competitive salaries, we offer a wide range of benefits to help you thrive both personally and professionally.

Wellbeing and work-life balance

- Generous annual leave allowance of 27.5 days holiday plus public holidays
- Enhanced sickness pay to support you through periods of illness
- Wellbeing provision including Mental Health First Aider support and regular learning sessions on wellbeing topics
- Flexible working and hybrid working arrangements where the role allows
- A 24/7 employee assistance programme including face to face counselling sessions
- Occupational health advice and support
- Eye care vouchers for display screen users
- Supportive policies to help you manage life events, for example becoming a carer, menopause, transitioning at work

Financial

- Generous defined contribution pension scheme with employer contribution up to 10% of salary
- Life insurance that will pay 4 times your salary to a beneficiary in the event of your death in service
- Season ticket and cycle loans to help you spread the cost of cycling to work
- Rental deposit loan scheme – to help you spread the cost of a deposit on a rental property
- 20% discount in our NHM shops both online and in store
- Discounts in our on site restaurants and coffee shops, and use of our staff canteen at South Kensington
- Discounts at local shops and restaurants within the South Kensington area

Cultural and lifestyle

- Free entry with your NHM staff pass to a wide range of museums and galleries across London and around the UK
- Every staff member is entitled to 10 complimentary tickets each year to give to friends and family
- Access to the Civil Service Sports and Social Club for a small monthly fee, offering a range of benefits such as discounted tickets to visitor attractions and gym membership discounts
- Access to the NHM Sports and Social Association for a small fee which provides access to our fitness centre at South Kensington and a range of activities and clubs including football and yoga

Family friendly

- Enhanced pay for maternity, paternity and adoption leave
- Flexible working and hybrid working arrangements where the role allows
- Supportive policies to help you manage fertility treatment
- Paid special leave to help you manage unexpected life events or to make caring arrangement.

How to apply

To apply, please complete an online application through our recruitment portal.

The closing date for applications is 5th July.

First stage assessment for this role is likely to take place in week commencing 6th July.

How we hire

We want everyone to be able to perform at their best throughout our hiring process. We've put together some information about how we hire as well as tips for completing your application and taking part in our assessment process. You can find this information on our careers site here.

Reasonable adjustments

We welcome applications from disabled candidates, and are committed to adapting our recruitment processes to make sure all candidates can perform at their best. If you require adjustments to our application process or require materials in a different format, contact us at hrteam@nhm.ac.uk.

If you need adjustments to the assessment stage of our hiring process, indicate this on your application form and we'll contact you before the assessment to put these in place.

We're part of the Disability Confident Scheme and guarantee an interview to all disabled candidates who meet the minimum shortlisting criteria for the role.