Candidate Information

Position:	Palaeoecology Research Fellow (Landscapes of Catastrophe)
School/Department:	School of Natural and Built Environment
Reference:	26/113269
Closing Date:	Monday 11 May 2026
Salary:	£41,519 - £42,756 per annum.
Duration:	30 Months or to 31 October 2028, whichever is soonest.

Job Purpose:

Landscapes of Catastrophe: archaeology, social-ecological and biological contexts for the Great Irish Famine, 1845–52 is an interdisciplinary project investigating the ecological, biological and social contexts of An Gorta Mór, the most profound demographic and diasporic event in Ireland over the last millennium during which more than two million people died or emigrated. The project develops new approached to constraining environmental and landscape chronologies for the period 1650–1960 CE and uses these to reconstruct demographic and agricultural change through palaeoenvironmental evidence. Six case study landscapes across Ireland form the core analytical framework, each illuminating different demographic, environmental, social, and religious impacts of the Famine.

The successful candidate will contribute a broad, multi-proxy palaeoecological skillset to the project. They will carry out field sampling and laboratory analysis of peat and soil sequences from case-study landscapes across Ireland, and will work closely with the project Co-Leads to deliver integrated palaeoenvironmental work packages. Core analytical responsibilities include pollen, non‑pollen palynomorph, plant macrofossil, XRF, isotopic, and tephra analysis, alongside the construction of Bayesian age–depth models using radiocarbon, 210Pb, and tephrochronology. Candidates with experience in metagenomics (sedimentary aDNA), biomarkers, or a demonstrated capacity to acquire new palaeoenvironmental techniques are strongly encouraged to apply. The successful candidate will receive tailored training and mentorship as appropriate, and will have access to state-of-the-art facilities including the 14CHRONO Centre (https://14chrono.org) and the Institute for Heritage and Environmental Science (https://www.qub.ac.uk/schools/NBE/Research/facilities-infrastructure/HeritageandEnvironmentalScience/) at QUB.

Successful applicants will have responsibilities for independent and directed research, supervision of technical analysis, assisting in the planning and day-to-day management of the palaeoecological work packages, related collaboration and outreach. The successful candidate will join laboratories with internationally recognised strengths in radiocarbon dating, palaeoecology, scientific archaeology and interdisciplinary approaches to understanding the past. The post benefits from more than £6m of recent investment in geochronology, isotope geochemistry, and analytical instrumentation (including XRF, X‑ray imaging, Micro‑CT, SEM, LA‑ICP‑MS, TQ‑ICP‑MS, and microprobe), offering extensive opportunities for training, skills development, and professional growth.

Main Activities / Responsibilities:

1. Assist in fieldwork and sample collection across all project areas (Northern Ireland and Ireland).
2. Lead and supervise laboratory preparation and analysis for multi proxy datasets.
3. Develop and refine chronological models integrating radiocarbon, 210Pb, and tephra constraints.
4. Assist with sedimentary aDNA sampling and integration of metagenomics results to multi-proxy analyses.
5. Undertake advanced integration and analysis of results within wider project datasets.
6. Assist in planning, coordinating and managing the palaeoecological components of the project., and where appropriate, delivery and write-up of results.
7. Carry out analyses, critical evaluations, and interpretations of existing datasets, and to review and synthesise existing literature within relevant fields.
8. Produce high-quality research outputs consistent with the project aims and commensurate with career stage. This will include collaborating and co-authoring with Co-Leads and project partners (as appropriate) on outputs.
9. In consultation with the project team, promote research milestones and outputs at national and international conferences and through social media (where applicable).

10. Assist in the preparation of discrete funding proposals and applications to external bodies as appropriate.
11. Engage and advise heritage stakeholders on access, sampling and results of same.
12. Undertake supplementary duties relevant to the success of the project, including administrative duties and additional training and development activities as required.

Essential Criteria:
1. Have a relevant PhD in Palaeoecology or closely cognate discipline
2. Specific, relevant* research experience to include:
• An established expertise and proven portfolio in multi-proxy palaeoecology research.
• Demonstrable experience in the collection, preparation and analysis of peat and soil sequences using palaeoecological and geochemical methods (including pollen, non‑pollen palynomorphs, plant macrofossils, XRF and tephra analysis), and in constructing robust age–depth models based on radiocarbon, 210Pb, and/or tephrochronology.
• Proven ability to publish in national/international journals (commensurate with stage of career).
• Experience of working effectively as part of a research team in the development and promotion of research project results.
3. Ability to contribute to broader management and administrative processes.
4. Experience of contributing to outreach programmes (e.g. stakeholders, general public).
5. Practical problem-solving skills, independence of thought and initiative.
6. Ability to assess and organise resources.
7. Ability to communicate complex information in English effectively in oral and written format.
8. Ability to build relationships to develop internal and external networks.
9. Commitment to continuous professional development.

Desirable Criteria:
1. Experience of sampling/analysis and integration of sedaDNA and/or biomarker data with other environmental proxies.
2. Experience of technical report writing and publication of same.
3. Experience of leading write-up of research results.
4. Knowledge of wider leading-edge advancements and applications in palaeoecology.
5. Track-record of working with archival materials and sampling for radiocarbon dating and materials analysis.
6. Experience of delivering collaborative results at international conferences (appropriate to career stage).
7. Familiarity with a wide range of fieldwork methodologies and practical experience of excavation and palaeoecological sampling.
8. Expertise related to post-medieval archaeology.
9. Experience of managing budgets and research finances.
10. Experience of engaging with external stakeholders.
11. Experience of trouble-shooting and maintenance of technical apparatus.
12. Experience of integrating and dissemination multi-proxy data.