



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Sustainable Soil Fertility

School of Earth and Environment, Faculty of Environment



Salary: Grade 7 (£32,548 – £38,833 p.a.)

Reference: ENVEE1214

Closing date: 7 January 2018

Fixed-term for 12 months (external funding)

Research Fellow in Sustainable Soil Fertility

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Are you an ambitious researcher looking for your next challenge? Do you have a background in Earth or Environmental Sciences? Do you want to further your career in one of the UK's leading research intensive Universities?

You will be a key member of the UK-China consortium project "Using Critical Zone Science to Enhance Soil Fertility and Improve Ecosystem Services for Peri-Urban Agriculture in China". The project is an international strategic research consortium grant awarded by the UK Natural Environmental Research Council (NERC) and the National Natural Science Research Council of China (NSFC) supported by the Newton Fund.

You will work directly with the research team at Leeds with our UK partners at The University of Sheffield, Queens University Belfast and the James Hutton Institute, and with our international partners in China. Your contribution to the project is to design and test field trials for the increased use of organic fertilisers to displace mineral nitrogen fertilisers for wheat production. You will also carry out a desk study on the commercial feasibility for large scale application of organic fertilisers as industrially processed materials produced from the processing of urban wastewater and manure waste streams in Chinese and UK agriculture. You will also prepare your reports of the field trials and desk studies and lead their submission for publication in high impact international journals.

You will have a PhD (or close to obtaining) in the field of Earth or Environmental Sciences, or a closely allied discipline, and have expertise in soil sciences, agricultural sciences, and/or terrestrial biogeochemistry or environmental engineering. You will show a strong commitment to publishing scientific results at an international level.

What does the role entail?

As a Research Fellow in Sustainable Soil Fertility your main duties will include:

- Reviewing scientific and technical evidence for the production and application of organic fertilisers derived from urban and agriculture waste streams;
- Collating information on the production base and capacity for organic fertilisers, their supply chain and distribution logistics;



- Preparing a business case for displacing the use of mineral nitrogen fertilizer by organic fertilizer including cost-benefit analysis and market and non-market value;
- Designing and carrying out prototype field trials for testing mineral fertiliser applications and their impact on soil fertility and wheat production;
- Working with the whole UK-China research team and the UK-China Critical Zone Observatory research programme to integrate and disseminate results;
- Relating your results and reviewed evidence to the interlinked global-scale challenges of population growth, food supply, climate change and energy demand for fertiliser production;
- Working with and in support of [Professor Steven Banwart's](#) research grant to ensure the project is successfully completed;
- Contributing effectively to the consortium of partners and communicating and presenting your review activities to the consortium and research programme;
- Contributing to the research culture of the School of Earth and Environment and the Cohen Geochemistry Group.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow in Sustainable Soil Fertility you will have:

- A PhD (or close to obtaining) in Earth or Environmental Sciences, or a closely allied discipline;
- A strong background in soil sciences, agricultural sciences, environmental engineering or terrestrial biogeochemistry;
- Demonstrated experience of conducting research, including developing and successfully carrying out your own research ideas as part of a research team;
- Demonstrated experience of collating a large body of research, to produce a research or technical report;
- A proven commitment to publishing research at an international level;
- Experience of working successfully as part of a larger research team;
- Excellent written and verbal communication skills including presentation skills and the ability to communicate effectively within a research team;



- Excellent organisational and planning skills, with the ability to plan large research campaigns;
- A proven ability to work flexibly, both as part of a team and independently, with proven ability to manage competing demands effectively, responsibly and without close support.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Professor Steven Banwart, Integrating Chair in Soil/Agriculture/Water Research
Tel: +44 (0)113 343 1413
Email: S.A.Banwart@leeds.ac.uk

Additional information

Find out more about the [Faculty of Environment](#) and our [School](#).

Find out more about [Athena Swan](#) in the Faculty.

Find out more about our [Research and associated facilities](#).

Working at Leeds

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our [Working at Leeds](#) information page.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.



Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

