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**JOB DESCRIPTION**

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| **Job Title:** Research Technician Plant and Soil Ecology | **Present Grade:** G5, 1.0 FTE |
| **Department/College:** LEC | |
| **Directly responsible to:** Richard Bardgett | |
| **Supervisory responsibility for:** None | |
| **Other contacts** | |
| **Internal:** Academic, technical and research staff and post-graduate students.  Staff and students within the Centre for Sustainable Soils (CSS) and LEC. | |
| **External:**  Collaborating research scientists involved in the project. | |
| **Purpose of role:**  This three-year role will provide technical support for a NERC funded project entitled “Shrub-driven transformation of the alpine soil carbon (C) cycle”, which is exploring how and why the upward expansion of ericaceous shrubs into alpine grasslands modifies ecological processes regulating soil C storage and C-cycle feedback to climate change. This will involve assisting a postdoctoral research assistant and project partners in the establishment, maintenance, and sampling of field experiments in the Austria Alps, and in taking routine measurements of soil C pools and fluxes in situ. The technician will also carry out extensive laboratory analyses of soil and vegetation samples In Lancaster, as directed by the Project Lead and PDRA, using a range of equipment for nutrient, carbon and greenhouse gas assessment. You will also assist with the preparation of soil samples for molecular analysis of soil fungal communities. Given that the field work is mainly carried out at high altitude sites in Austria, the technician will need to have extensive field experience and be familiar with working in extreme environments.  **Key Competencies:**  Experience of analysis of plant and/or soil material for nutrients and carbon, and greenhouse gas fluxes, using a range of experimental approaches. Competent in the use of data management software (Excel and R), field sampling of soils, and in the safe handling of chemicals for analysis of soil nutrients and carbon pools. Good organisation skills to ensure efficient running of the project.  ***Service Delivery / Workspace Specific Duties***   * Assist in the setting up, maintaining and sampling of field and laboratory experiments designed to test how and why ericaceous shrubs impact fungal communities and rhizosphere C and nitrogen (N) dynamics, and consequences for soil C storage. * Carry out routine laboratory research duties as directed by the grant project lead and appointed PDRA using a range of equipment for assessment of soil nutrients, C pools and fluxes, including the use of stable isotopes, and DNA extraction for molecular analysis of fungal communities * Assist in the maintenance and sampling of controlled environment experiments growth chambers, and preparation of samples for laboratory analysis * Be responsible for some local laboratory budgeting related to the project and the purchasing and procurement of consumables and equipment * Meticulous data management and potential assistance with basic statistical analyses * Participate in the preparation and collation of data for scientific publications * Maintain all laboratory stock materials   ***Teamwork and Motivation***   * Work in this role is largely independent after training and so role holder should be able to manage workload and demands, with oversight by the project PI and the PDRA. * Assist and support other staff in the Centre for Sustainable Soil.   ***Management and Leadership***  No direct requirements but the role holder will be responsible for the efficient operation of an important national air quality network.  ***Health, Safety and Wellbeing***   * Work safely in the laboratory and carry out COSHH (Control of Substances Hazardous to Health) and risk assessments as necessary and disseminate information appropriately. * Ensure safe working practices in the laboratories and facilities are adhered to where appropriate. * Ensure understanding of and correct disposal for hazardous materials. * Identify and report building and service faults appropriately.   ***Teaching and Research***  There is no teaching requirement for this role although limited laboratory supervision of post graduate students may be required.  ***Planning and Organisation***  The project requires planning and preparation for conducting field campaigns in Austria, and in the organisation of transport of soil samples to Lancaster for laboratory analysis.  ***Communication***  Regular meetings with the project PI and the PDRA will be required to ensure that the project is running efficiently.  ***Other***  There is the potential to be required to undertake any other duties appropriate to the grade of the post as required by the Head of Department or their nominated representative. | |