# Position Details

## Research Projects- CSOF3

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| The following information is for applicants |
| Advertised Job Title | Laboratory Technical Officer - Soil Biogeochemistry |
| Job Reference | 96262 |
| Tenure | Specified Term of 3 years, Full-time |
| Salary Range | AU$70k - AU$90k per annum (pro-rata for part-time)plus up to 15.4% superannuation |
| Location(s) | Adelaide (Waite Campus Site), SA, Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents
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| Position reports to the | Team Leader Biogeochemical Cycles |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Mark Farrell via email at mark.farrell@csiro.au or phone +61 8 8303 8664 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work.

The Laboratory Technical Officer - Soil Biogeochemistry will directly support the delivery of key data on soil carbon concentrations and stability, and soil nitrogen dynamics across a number of national projects within the Biogeochemical Cycles Team and wider Footprinting and Credentials Group Adelaide.

The position will require demonstrated hands-on experience in the understanding, measurement and inference of soil biogeochemical properties, measured directly and proximally sensed in the laboratory.

Familiarity with stable isotopes and their use to quantify soil C and N flows is highly desirable. Data handling and analysis skills will also be needed to ensure that workflows are consistent and that data provenance is clear and reproducible. Users of these data include other technical staff, and soil and agricultural scientists, including modellers and data scientists.

Joining the Accounting and Function Group Adelaide, the Research Projects Officer will have access to a unique range of laboratory instrumentation, including FT-IR, elemental analysers, isotope ratio mass spectrometry, nuclear magnetic resonance, and chromatography instrumentation. A tailored career development and training program will be provided.

This position is for 3 years, with possibility of conversion to indefinite, subject to funding and strategic alignment.

### Duties and Key Result Areas

* Under limited supervision, design and perform straightforward experiments and routine laboratory analyses, design new processes or apparatus by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring some innovation.
* Deliver high quality and consistent data on concentrations, vulnerability and dynamics of soil carbon and nitrogen, and the processes that drive these.
* Perform some non-routine analyses activities using a range of techniques, often working on a number of parallel and competing tasks.
* Work with discretion to decide on the timing of operations within the work team’s plan and plan ahead to meet experimental and/or project demands.
* Independently test possible solutions to resolve identified problems.
* Take responsibility for maintaining laboratory consumables and scheduling and instructing staff in the use of shared equipment.
* Oversee the activities of less experienced staff and provide guidance on experimental/ technological techniques and protocols as required.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Relevant bachelor’s degree or equivalent combination of qualification and demonstrated relevant work experience in soil science, agricultural science, environmental science, analytical chemistry, or similar fields of science.
2. Demonstrated hands-on experience in the measurement of soil chemical and biological properties, including the use and maintenance of laboratory equipment.
3. A clear understanding of the requirements of conducting analysis in dynamic biological systems and the precautions required to limit or avoid experimental artefacts.
4. Practical knowledge of how stable isotopes may be used in experiments in order to trace source and fate of C and N in plant-soil systems
5. Demonstrated practical knowledge of Australian landscapes and soils, their constraints and opportunities.
6. The ability to work effectively as part of a multi-disciplinary or regionally dispersed research team, and the motivation and discipline to carry out autonomous work components.
7. A current Australian driver’s licence.

## **Desirable**

1. Demonstrated hands-on experience in measuring soil properties using proximal tools such as infrared spectroscopy (e.g. FT-IR, Vis-NIR) in a laboratory setting, and knowledge of, or clear evidence in developing a skillset in the laboratory and data requirements for soil inference calibration and validation.
2. Demonstrated programming skills in one or more scientific coding languages including (but not limited to) Python and R.

## **Required Competencies**

* **Teamwork and Collaboration:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Agriculture and Food - CSIRO](https://www.csiro.au/en/about/people/business-units/agriculture-and-food) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted