# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Scientist – Soil Carbon |
| Job Reference | 63523 |
| Tenure | Indefinite  Full-time |
| Salary Range | AU$113,338 to AU$132,811 pa + up to 15.4% superannuation |
| Location(s) | Waite Campus, Adelaide SA |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Lynne Macdonald via email: lynne.macdonald@csiro.au |
| 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](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Role Overview

Research conducted within CSIRO Agriculture and Food is transforming productivity, profitability and sustainability in Australia's food and fibre industries. Our research is informing the global response to food and nutritional security for the world's growing population.

As a Senior Research Scientist within CSIRO Agriculture and Food, you will lead the soil carbon research portfolio, delivering innovative research solutions to national and global challenges aligned with our organisational strategy. Your research will advance our understanding of soil carbon and its dynamics in terrestrial ecosystems, developing new tools and metrics to support sustainable land management and national carbon accounting systems.

Based at the Waite Campus Adelaide, you will have access to world class research capability including spectroscopic techniques to isolate and characterise soil organic matter, stable- and radio- isotope techniques to trace elemental flows and fate, and controlled environment facilities. Your role will include management of analytical and staffing capability appropriate to your technical skillset.

Working collaboratively across the innovation sector you will provide scientific leadership to build high performing multi-disciplinary research teams, grow your existing industry and government relationships, and secure research funding to deliver high impact outcomes. As an indefinite appointment you will benefit from a range of career development opportunities within Australia’s National science organisation.

### Duties and Key Result Areas:

* Lead innovative research and incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Engage with industry to drive new business and research funding by anticipating industry and/or community needs and market direction through client liaison/networking and identify and adapt quickly to changes.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Produce high quality scientific papers suitable for publication in quality journals and for presentation at national and international conferences.
* Effectively manage analytical and staffing capability within a shared collaborative research group environment.
* Represent CSIRO externally at scientific, industry, and Government events, and at public forums, acting as a trusted advisor, providing advice to policy makers, and transferring knowledge to scientific and non-scientific audiences.
* 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.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria**

#### Essential

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

1. **Education/Qualifications:** A doctorate [or equivalent experience] in a relevant discipline area such as soil science, biogeochemistry, or analytical chemistry with demonstrated applications to environmental/agricultural sciences.
2. **Analytical expertise:** Demonstrated knowledge and skills in techniques to quantify, characterise, and predict soil carbon content, including infra-red and/or nuclear magnetic resonance spectroscopy.
3. **Data analytics:** Advanced skills in data management and statistical analysis, with demonstrated competencies in chemometrics and/or programming (e.g. R, Python) applications to understand and quantify soil carbon or biogeochemistry.
4. **Science leadership:** An established funding portfolio demonstrating an ability to engage with industry and government, to consistently secure funding, and to build high performing multidisciplinary teams.
5. **Management of science capability:** Demonstrated ability to effectively manage analytical and staff resources and to establish processes to ensure timely and cost-effective delivery of high-quality data.
6. **Publication record & research networks:** A publication record of high-quality research outputs in international journals, demonstrating enduring national and international research networks.

**Desirable:**

1. **Simulation modelling:** Demonstrated competency in the use of soil carbon models and their application to inform sustainable land management practices and to inform carbon accounting metrics and/or policy.
2. **Spatial analysis and modelling:** Demonstrated application of spatial analysis and modelling techniques to understand and predict soil characteristics across landscape scales.
3. **Mechanistic understanding:** Demonstrated expertise in applying biomarker and tracer technologies to quantify and decipher microbial and / or mineralogical drivers of soil organic C dynamics.
4. **Field experience:** Capability to successfully design and undertake field sampling in agricultural and/or remote locations.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* The successful candidate may be required to undertake a pre-employment medical examination prior to commencement.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- https://ielts.com.au/
* The successful candidate is required to hold or have the ability to obtain an Australian drivers’ licence.

## **Apply Online**

To apply online, please provide a cover letter highlighting your interest in the role, a document addressing your suitability against each of the selection criteria, and a current CV.

## **About CSIRO:**

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Find out more about CSIRO [Agriculture and Food](https://www.csiro.au/en/Research/AF)