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| **JOB DESCRIPTION** |
| **SPECIFIC JOB TITLE** | Senior Specialist, Soil and Environmental Metrics |
| **GENERIC ROLE TITLE** | PRINCIPAL RESEARCH SCIENTIST |
| **LEVEL/GRADE** | G |
| **JOB FAMILY** | SCIENCE |
| **CONTRACT TYPE** | 24 months, fixed-term |
| **HOURS** | 7.4 hours per week |
| **REPORTS TO** | Martin Broadley  |
| **DEPARTMENT** | Sustainable Soils and Crops |
| **LOCATION** | Harpenden |
| **DATE**  | November 2024 |
| **OVERVIEW OF ROLE/JOB PURPOSE** |
| Overview: This is a specialised role requiring a combination of high-level skills spanning soil, crop, and environmental sciences, to include pedology and geostatistics, alongside wider transdisciplinary skills in areas such as expert elicitation/co-design, and communication. The role will take the lead on work to design, develop and deploy new approaches to Monitoring, Reporting, and Verification (MRV) for a wide range of soil properties and environmental metrics and co-variates, including those observed and predicted under altered agronomic practices and environmental change. Metrics will include those arising from the quantification of the movement of macro- and micro-nutrients and trace elements in soil-crop systems, alongside soil water, soil carbon, and other indicators of soil health, and outputs of modelling studies, together with associated uncertainties. These activities will be aligned to projects that are supported by a range of public and private sector funders, and the role therefore requires a high level of collaborative skills, to be deployed both within and outside the organisation, and autonomy to develop and lead on new funding streams. The role holder is also expected to carry out the duties listed below and any other duties reasonably required by the line manager or Institute, commensurate with the grade and level of responsibility for this post. |
| **MAIN DUTIES OF ROLE** |
| **Generic Outputs** | **Weighting** | **Description of Outputs**  | **Description of Job Specific Duties** |
| **UNDERTAKING THE RESEARCH** | 30% | Initiating and driving major projects for the Institute or leading a substantial programme of research | * Lead the development and implementation of research strategy for the group/department/ISPG
* Initiate and implement new and original solutions to problems
* Lead on the development of new initiatives and shape the direction of major research projects
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| **ANALYSIS, PRESENTATION AND PUBLICATION** | 20% | Leading/directing the publication as a group, of a number of research papers per annum, including a number in high-impact journals (i.e. those considered to be highly influential in their fields) | * Lead the process of analysing and interpreting research data and information
* Secure the publication of key results in leading international journals, articles and/or books, which further develops individual and team reputation in the subject area
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| **FUNDING AND FINANCIAL MANAGEMENT**  | 20% | Securing funding from novel sources and mobilising resources in support of a larger research area/programme from diverse national and international sources | * Act as major contributor to multiple grants, winning a number of substantive grants per annum
* Support scientists in the development of grant proposals and other new initiatives and play a proactive role in seeking new areas of strategic funding
* Develop interactions/ collaborations within and outside the Institute which translate into generating research income
* Manage significant financial budgets for the research programme
* Mobilise resources in support of larger research area/programme, from diverse national and international sources (e.g. public sector, private foundations/ donors)
* Influence funding policy within the sector and professional associations/bodies
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| **WORKING WITH OTHERS**  | 15% | Leading and influencing interactions with other scientists and stakeholders | * Leading major Institute initiatives or directing others for the benefit of the wider Institute and enacting responsibilities outside own research interests/management team
* Make a significant impact on internal operations of the Institute, participating on internal panels and strategy review committees and developing internal networks
* Lead the development and implementation of scientific collaboration and strategic partnerships with public and private research partners, nationally and internationally
* Play an active role in review of papers for international scientific journals and serve on editorial boards
* Be an active member of scientific societies or other national/international initiatives, assuming leadership roles where appropriate
* Provide a high level of expert advice to Institute management
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| **LEADERSHIP AND MANAGEMENT** | 5% | Contributing to Institute leadership roles; fostering strong performance among teams, and proactively managing talent/employee development for whole department or research group | * Co-lead the organising and deployment of resources within own area of research/ISPG/ department
* Co-lead a substantial programme of research as principal investigator/project leader on multiple substantive grants
* Ensure that all legislative and Institute requirements are met for own work area and, where applicable, the department; and ensure that a safe working environment is maintained at all times
* Ensure all appropriate people process are implemented asper required Institute standards
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| **KNOWLEDGE EXCHANGE, COMMERCIAL-ISATION AND OUTREACH** | 5% | Leading interactions with funders, partners, end-users and other stakeholder of the Institute; public engagement and commercialisation activities | * Lead and deliver research outcomes in the form of policies and new alliances with private organisations
* Manage responses to government consultations and policy, where appropriate
* Regularly give plenary lectures, speak at international meetings and organise national or international workshops
* Lead training activities, including short-term training courses at a national/international level
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| **CONTINUING PROFESSIONAL DEVELOPMENT** | 5% | Leading, reviewing and refining learning and development in teams and creating an environment which enables self and others to develop | * Support a climate where everyone is encouraged to fulfil their true potential, and champion effective performance management and development throughout the Institute
* Develop strategies that systematically develop the capability of the organisation (i.e. talent management initiatives, implementation of performance benchmarks, facilitating secondments, lateral moves, establishing coaching/mentoring networks)
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| **Competencies** |  | All stage 5  | * See Appendix
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| **PERSON SPECIFICATION AND SHORTLISTING CRITERIA\*** |
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| **DEPARTMENT** | Sustainable Soils & Crops |
| **LOCATION** | Harpenden |
| **EDUCATION/QUALIFICATIONS** | Essential | Desirable | How Tested?\*\* |
| 1. | PhD and more than 10 to 15 years of relevant scientific and managerial experience | X |  |  |
| 2. |  |  |  |  |
| **EXPERIENCE/KNOWLEDGE/SKILLS** | Essential | Desirable | How Tested?\*\* |
| 1. | Distinguished publication record through refereed journal articles, monographs and conference publications | X |  | AF |
| 2. | Leading authority in the subject, with a considerable national and international reputation | X |  | AF |
| 3. | Thorough understanding of Institute management systems and the wider research environment | X |  | AF |
| 4. | Experience of managing and controlling substantial budget/resources/ funding and an excellent understanding of financial management procedures | X |  | AF |
| 5. | Exceptional personal track record of research income-generation from a range of sources and willingness to work with colleagues to enhance their effectiveness in obtaining research income | X |  | AF |
| 6. | Proven skills in leading, motivating, developing and managing the performance of others, ensuring the effective overall performance and development of the research group/department | X |  | AF |
| 7. | Evidence of developing new techniques, standards and methods, and acting as a role model for best practice | X |  | AF |
| 8. | Awareness of current and future priorities of the research group/programme/ department/Institute | X |  | AF |
| **BEHAVIOURS/COMPETENCIES** | How Tested?\*\* |
| 1. | **Drive for Quality**: Takes calculated risks to achieve goals | AF/IV |
| 2. | **Strategic Thinking**: Shapes organisational vision in context of wider external environment and creates new paradigms | AF/IV |
| 3. | **Creativity and Innovation**: Leads, enables and shapes change | AF/IV |
| 4. | **Developing Self and Others**: Creates environment that helps self and others to develop, and anticipates future learning beyond current job requirements or needs | AF/IV |
| 5. | **Professional Conduct**: Nurtures a climate of mutual respect | AF/IV |
| 6. | **Productive Relationships**: Proactively builds team spirit | AF/IV |
| 7. | **Effective Communication**: Actively develops and protects the reputation of the department/ Institute | AF/IV |
| **GENUINE OCCUPATIONAL REQUIREMENTS** | Essential | Desirable | How Tested?\*\* |
| 1. |  |  |  |  |
| 2. |  |  |  |  |