

Job Description

Please complete all accessible boxes and refer to the guidance on writing Job Descriptions

Position Details	
Faculty/Directorate	Science and Engineering
School/Department	Natural Sciences
Team	NA
Job Title	Research Associate in Geochemistry and Organic Carbon Burial
Grade	7
Hours of Work	37.5 pw
Contract Duration (Perm/Fixed Term)	Fixed Term for 12 months from 1 April
Reports To (Job Title)	Dr Trish Linton (Deputy HoD)
Responsible For (Job Title)	NA

Principal Accountabilities
<p>The research associate will support the “Enhancing Climate Resilience in the Somerset Coast” project, which is funded by the government’s Green Recovery Challenge Fund. The Green Recovery Challenge Fund is funded by Defra and is being delivered by The National Lottery Heritage Fund in partnership with Natural England and the Environment Agency.</p> <p>The project aims to understand and quantify organic carbon burial in restored wetland ecosystems, of different types and under different management regimes, to determine their value as sites of net carbon sequestration.</p> <p>This work will include:</p> <ul style="list-style-type: none"> - Preparing, conducting, and recording the outcome of fieldwork. - Taking field measurements of greenhouse gas fluxes - Carrying out careful geochemical laboratory measurements - Analysing results in order to determine the sources of carbon - Quantifying organic carbon storage in restored wetlands - Presenting findings to stakeholders and in academic journals <p>The research associate will work closely with senior research staff to analyse and disseminate research findings through relevant journals, conferences, and seminars. They will take responsibility for the management of discreet research projects as directed by the project co-ordinator.</p>

Key Tasks

Research Activities

- 1) Work with senior research staff, project partners and local community members to **design and carry out a regime of field sampling** that will enable an assessment of carbon storage and greenhouse gas fluxes at restored wetlands, including:
 - Collecting sediment samples from restored wetlands and proposed managed realignment sites
 - Making field measurements of greenhouse gas fluxes
 - Working safely and competently in intertidal environments.
- 2) Undertake **laboratory analyses** of soils and sediments to trace material of terrestrial and marine origin, including the measurement of:
 - organic biomarkers (via Liquid Chromatography – Mass Spectrometry)
 - bulk carbon and nitrogen concentrations (via Elemental Analysis)
 - stable carbon and nitrogen isotopes (via Isotope Ratio Mass Spectrometry).
- 3) Undertake detailed **numerical and spatial analysis** on the generated dataset, drawing robust conclusions regarding:
 - sources of organic carbon using bulk and biomarker data
 - rates of carbon burial in restored wetlands
 - potential for long term carbon sequestration via wetland restoration
- 4) Disseminate **the research results** to academia and the wider community via:
 - Preparation of research manuscripts for publication in suitable journals
 - Presenting findings to appropriate internal and external groups, such as research forums, conferences, or seminars.
 - Updating the research team and relevant stakeholders, including progress reports for the funding agency
 - Social media, local media articles and interviews.
- 5) **Manage** your own time, and others':
 - Planning and prioritise own day to day work and resources to achieve agreed research objectives
 - Leading the work of small teams of research assistants and/or research students as required.
 - Using initiative and judgement to develop and apply appropriate techniques in order to facilitate research work and resolve problems.

Liaison and Networking Activities

Contribute to the dissemination of research findings through journals, conferences and seminars, in order to further the institution's standing in the HE and research community.

Participate in the development of internal and external partnerships and networks to disseminate information, share best practice, generate income, establish opportunities for collaborative work, and to enhance the reputation of the University, Faculty and Department.

Teaching Support

Supervise the work/projects of taught postgraduate and/or research students as required and provide training on techniques appropriate to the role.

Contribute to teaching support via demonstration of practical methods or operation equipment to undergraduate, masters and/or research students, and giving specialist lectures as appropriate.

Service Provision

Keep relevant stakeholders updated on progress, and be responsible for exploring their needs, and acting on feedback, in order to ensure that research delivers against their requirements.

Collaborate with senior academic staff to organise, manage and carry out appropriate research.

Respond to enquiries and requests for information from potential students, academic staff from other HE institutions, and relevant stakeholders, when required.

Proactively and effectively engage with quality assurance procedures to ensure that University standards are upheld.

Teamworking

Actively participate as a member of the research team, providing mutual support to colleagues to achieve successful completion of projects.

Attend Faculty, Department and Programme meetings/boards as appropriate and proactively contribute to decision making.

Introduce new starters to the area, giving training on basic skills and activities to assist their induction to the team.

Guide and support research assistants and other members of staff within the department in areas of expertise e.g. in undertaking research and writing up papers for publication.

Special Features

Ability to travel occasionally to the field sites in Somerset, and conduct field sampling.

Available to start the post on the 1 April 2021.

Miscellaneous

You have a legal duty, so far as is reasonably practicable, to ensure that you do not endanger yourself or anyone else by your acts or omissions. In addition, you must cooperate with the University on health and safety matters and must not interfere or misuse anything provided for health, safety and welfare purposes.

You are responsible for applying the University's Equal Opportunities Policy in your own area of responsibility and in your general conduct.

You have a responsibility to promote high levels of customer care within your own areas of work.

You are expected to co-operate with the PDR process, engaging in the setting of objectives in order to assist in the monitoring of performance and the development of the individual.

Such other relevant duties commensurate with the grade of the post as may be assigned by the Manager in agreement with you. Such agreement should not be unreasonably withheld.

You may be required to undertake a specific Health & Safety role, commensurate with your grade, to support the University in meeting its statutory Health & Safety obligations. This could include acting as a DSE Assessor, First Aider, Fire Marshall or Departmental Safety Co-ordinator. The allocation of such roles will be subject to the provision of appropriate training and assessment of competence.

You may, with reasonable notice, be required to work at any of the Manchester Metropolitan University sites.

You have the responsibility to engage with the University's commitment to Environmental Sustainability in order to reduce its waste, energy consumption and carbon footprint.

You have the responsibility to engage with the University's commitment to delivering value for money services that optimise the use of resources and therefore should consider this when undertaking all duties and aspects of your role.

Review

This is a description of the job at the time of issue. It is the University's practice periodically to review and update job descriptions to ensure that they accurately reflect the current nature of the job and requirements of the University and to incorporate reasonable changes where required, in consultation with the jobholder.

Person Specification

In order to be shortlisted you must demonstrate that you meet all the essential criteria and as many of the desirable criteria as possible. Where we have a large number of applications that meet all of the essential criteria, we will then use the desirable criteria to produce the shortlist.



All disabled candidates who meet the minimum essential criteria will be included on the shortlist.

Selection Criteria

Attributes		Item	Relevant Criteria	Essential/ Desirable
1	Skills & Abilities	1.1	Ability to synthesise complex data from different sources and communicate findings orally and via written reports and articles for a range of diverse audiences.	E
		1.2	Ability to use initiative, creativity and judgement to develop appropriate approaches in order to further research.	E
		1.3	Ability to lead the work of a research team, co-ordinating effort and resources	D
2	General & Specialist Knowledge	2.1	Proficiency in the extraction, purification and measurement of organic biomarkers	D
		2.2	Proficiency in the application of relevant equipment, software and techniques including: - bulk carbon and nitrogen contents (Elemental Analysis) - stable isotope analysis (Isotope Ratio Mass Spectrometry) - GIS	D
		2.3	Experience of fieldwork in wetland environments and/or fieldwork collecting samples for geochemical analysis	D
3	Education & Training	3.1	Hold, or be undertaking and working towards a doctoral level qualification; evidence of continuous professional development.	E
4	Relevant Experience	4.1	Research experience in the field of geochemistry, which should include: <ul style="list-style-type: none"> making a demonstrable, independent contribution to projects preparing written reports of results 	E

		4.2	<ul style="list-style-type: none"> publication record appropriate to current career stage <p>Additional research experience, including:</p> <ul style="list-style-type: none"> building relationships, networks and partnerships with internal and external contacts presenting at national and/or international research meetings preparing funding proposals and applications to external bodies supervising student work and providing appropriate support and feedback Communicating and engaging with members of the public. 	D
5	Special Requirements	5.1	Ability to travel to field sites and undertake field sampling.	E
		5.2	Full UK driving license	D
Date of Revision		10 February 2021		