Research Fellow
SCHOOL OF BIOLOGICAL SCIENCES

Closing date: 11 March 2021
Interview date: To Be Confirmed
Reference number: SBS089RX
**INTRODUCTION**

We are seeking a highly skilled and technically accomplished research fellow with a strong academic foundation to champion a new collaborative venture with Curtin University, Western Australia and an Australian Government funding agency.

Research Fellow - Environmental Fate of Metals in the Environment

A suitably qualified Research Fellow is sought to drive an 18 month funded project.

This is the first of a number of projects between the University of Aberdeen, Curtin University, a broad stakeholder group and the National Decommissioning Research Initiative (NDRI https://www.nera.org.au/NDRI) (part of the National Energy Resources Australia (NERA https://www.nera.org.au/)). NERA is one of 6 growth centres funded by the Australian Government Department of Industry, Science, Energy and Resources. In conjunction with a world-class team from Curtin University, based in Perth Australia, the team engaged in this project will focus on the marine impact assessment from Naturally Occurring Radioactive Material (NORM) and Mercury (Hg). The successful applicant will be joining a multidisciplined academic team spanning the UK, Spain and Australia with expertise in environmental analytical chemistry, environmental impact assessment, NORM, Mercury, risk assessment and aquatic ecotoxicology. The successful candidate should have experience in environmental modelling, ecotoxicology and quantitative risk assessment. The successful candidate will be required to develop a model for the source, fate, analysis and risk assessment of mercury in the marine environment. The data to derive the model will be collated through working with academic partners and a wide range of stakeholders that include oil majors, regulators and energy partners.

This project is led by Dr Astley Hastings, Reader in Environmental Science based in the School of Biological Sciences, University of Aberdeen. Dr Hastings is an engineer with an industrial career in the upstream oil and gas industry and more recently an academic focus into the environmental impact of energy systems. He is the course coordinator for the Marine Environmental Impact Assessment course in the Decommissioning and Offshore Engineering MSc programmes and part of a large research group that includes projects based in the UK National Decommissioning Centre in Aberdeen. The appointment will be based jointly in the University of Aberdeen, School of Biological Sciences (SBS) and the UK National Decommissioning Centre (NDC).
JOB DESCRIPTION

Main purpose of the role:

SBS-NDC is seeking a researcher with a set of skills that are both academic and industrial. Applicants should have a solid understanding of potentially toxic elements, their forms and environmental fates. The candidate should have a strong marine or aquatic ecotoxicology background to underpin the risk-based marine impact assessment of Mercury derived from decommissioned offshore oil and gas pipelines. This risk assessment methodology should specifically target mercury, but could be extended to other toxic elements and Naturally Occurring Radioactive Material (NORM). This research programme is one of a number of projects performed for, and on behalf of, the National Decommissioning Research Initiative. The successful candidate will be joining a multi-disciplined team spanning the UK, Spain and Australia with expertise in environmental analytical chemistry, environmental impact assessment, Hg, NORM, quantitative risk assessment and aquatic ecotoxicology.

Key Responsibilities:

The successful candidate will contribute their expertise to the review and interpretation of existing public domain and confidentially sourced industry data characterising the concentration and quantity of Hg in oil and gas infrastructure and ecotoxicology risk modelling to marine biota. It is anticipated that there will be gaps in the published/industry data on the likely receptors of interest and their response to potentially toxic elements (including Hg) their species and concentrations. A material contribution is also expected in the development of a risk framework for the combined impact assessment of NORM and Hg to marine biota in collaboration with Curtin University and other research team specialists. The successful candidate will not be expected to produce further empirical data but to draw attention to priority areas that merit future investigation.

- **Sourcing, assimilating, processing, interpreting key publicly available and confidential data related to the fate and transfer of metals (specifically Hg) in the environment;**
- **Collating, interpreting and presenting data;**
- **Communicating summary findings to experts in the field and developing lines of evidence for justification;**
- **Linkage of data to decommissioning pipelines;**
- **Development of methodologies to determine quantity of mercury in pipelines (though not having to prove this empirically);**
- **Development, optimisation, application and validation of a quantitative risk assessment tool for Hg that could be extended to work for other potentially toxic elements.**

**AT A GLANCE:**

**SALARY:**

Grade 6  
£33,797 - £36,914

**HOURS OF WORK:**

Full Time – 37.5 hours per week

**CONTRACT TYPE:**

Project Limited – 18 Months
CANDIDATE BACKGROUND

Candidates should meet the following criteria

Knowledge:
A high level of knowledge and experience of heavy metal ecotoxicology
• Specific experience of understanding the source, form and environmental fate of potentially toxic elements (with specific reference to mercury) in a marine environment associated with decommissioned oil and gas pipelines
• Having the understanding to develop, apply and validate environmental risk frameworks.
• Emerging research track in pollution sciences with reference to the energy sector.
• While a doctoral qualification and a published record in aquatic ecotoxicology/pollution sciences is preferred for this role, industrial experience and applicability will be considered.

Skills:
• Ability to work between academic and industrial partners.
• Data processing and data presentation experiences.
• Ability to design, develop, apply and calibrate models from theoretical scenarios.
• Development and optimisation of environmental models.
• Working to deadlines.
• Team working and ability to integrate a wide range of user needs into a single product.
• Communication with a wide range of partners across time zones.
• Understanding of the constraints of collecting environmental data.

Experience:
• Project management.
• Data management and interpretation.
• Strong written and spoken communication skills.
• Ethical research.
• Meeting deadlines.
TERMS OF APPOINTMENT

Salary will be at the appropriate point on the Grade 6 salary scale and negotiable with placement according to qualifications and experience.

Any appointment will be made subject to satisfactory references and a 6 month probation period and a 12 month probation period.

This project is externally funded and is available for an 18 month period, with an end date no later than 31 May 2022.

For further information on various staff benefits and policies please visit [www.abdn.ac.uk/staffnet/working](http://www.abdn.ac.uk/staffnet/working)

Should you require a visa to undertake employment in the UK you will be required to fulfil the minimum points criteria to be granted a Certificate of Sponsorship under the requirements of the Skilled Worker visa. At the time an offer of appointment is made, you will be asked to demonstrate that you fulfil the criteria in respect of qualification and competency in English. For research and academic posts, we will consider eligibility under the Global Talent visa. Please do not hesitate to contact, Natalie Reid, HR Adviser (e-mail: n.reid@abdn.ac.uk) for further information.
### Person Specification

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<th>Education/Qualifications</th>
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<td>• BSc/ BEng/MSc In Engineering, Environmental Science, Chemistry, Marine Science or similar.</td>
<td>• A record of publications in the multi/ trans/ inter disciplinary area that shows an understanding of the relationship between oil and gas production and environmental impacts.</td>
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<td>• Will have familiarisation in the offshore industry related to subsea installations and their impact on the environment.</td>
<td>Doctoral qualifications and a published record in appropriate disciplines</td>
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<td>• Knowledge of aquatic ecotoxicology and experience in Environmental Impact assessment.</td>
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<td>Work and Other relevant experience (including training)</td>
<td>• Specific experience of working with Hg or potentially toxic elements desirable in laboratory and/or in theoretical systems.</td>
<td>• Critical and practical knowledge of chemical analytical techniques.</td>
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<td>• Experience with the development of environmental risk frameworks.</td>
<td>• Familiarity with a range of bespoke and established risk assessment models</td>
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<td>• Working as part of a team where individuals have clearly defined tasks to deliver.</td>
<td>• Familiarisation with fate and transfer models for potentially toxic elements</td>
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<td>• Adapt to challenges set down by the diverse nature of the data gathered.</td>
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<td>• Experience in the development, application and validation of environmental models</td>
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<td>Personal qualities and abilities</td>
<td>• Emerging research track record/potential to conduct quality research and contribute productively to research teams under supervision.</td>
<td>• Ambitious to publish independent peer reviewed manuscripts in the area of the project.</td>
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<td>Problem solving and ability to work within a team where clear targets have been set.</td>
<td>• Willingness to supervise project students</td>
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<td>• Able to work as part of team and attend meeting across many time zones</td>
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Aberdeen is a broad based, research intensive University, which puts students at the centre of everything it does. Outstanding in a wide range of discipline areas, Aberdeen has also been credited for its international reach and its commercialisation of research ideas into spin out companies. The University has over 16,000 matriculated students and 3,600 staff representing 130 nationalities. We encourage bold thinking, creativity and innovation, and we nurture ambition with many opportunities for professional and personal development in an inclusive learning environment which challenges and inspires.

2019 Highlights

- **Scottish University of the Year (Times & Sunday Times)**
- 70th in the world for research citations (THE)
- 32nd in the world for contribution to the UN sustainable development goals (THE)
- 28th most international university in the world (THE)
- 15th equal in the UK for overall student satisfaction (NSS)
- 11th best student intake in the UK (Times & Sunday Times)
- Percentage of Scottish intake from most deprived areas up from 4.5% in 2018/19 to 9% in 2019/20

Current Context

The University will build on the significant achievements above in 2020 and beyond. Underpinning our high performance and significant growth is a £100m investment in Aberdeen’s estate which will include the completion of a new Science Teaching Hub, the regeneration of the historic King’s Quarter, and a new Business School building. The University has also invested in 50 new academic posts, and 2020 will see the launch of 5 Interdisciplinary, cross-institution Research Centres that will catalyse world-leading research in our areas of research strength. The 5 Interdisciplinary Challenges are: Energy Transition; Social Inclusion and Cultural Diversity; Environment and Biodiversity; Data and Artificial Intelligence; and Health, Nutrition and Wellbeing.

The University of Aberdeen is a recent recipient of The Queen’s Anniversary Prize, awarded to recognise world-class excellence in innovation and practical benefit to people and society. The University was given this award for health service research leading to improvements in academic and clinical practice and delivery of health care.

International

Aberdeen is also increasing its international presence, positioning the University as a global organisation, and building on its established partnership in Qatar with new partnerships in Sri Lanka, with the International Institute of Health Sciences, and in China, with Shanghai University and SCNU.

The University of Aberdeen is proud to be the first UK University to operate on a dedicated campus in Qatar. Phase 1 of this partnership with AFG College has successfully recruited over 600 students. Phase 2 will see the creation of a substantially larger campus, with capacity for at least 5,000 students and research activity. For further information on our Qatar campus, visit [https://www.abdn.ac.uk/qatar/](https://www.abdn.ac.uk/qatar/).
On Founders’ day in 2020, our 525th anniversary as a University, we launched our new strategy ‘Aberdeen 2040’. Over the next 20 years, four strategic themes will shape our learning, discovery and strategic actions:

**INCLUSIVE**: We welcome students, staff and partners from all backgrounds, organisations and communities. We value diversity.

**INTERDISCIPLINARY**: We innovate in education and research by generating, sharing and applying new kinds of knowledge. We learn together.

**INTERNATIONAL**: We connect with others and extend our networks and partnerships around the world. We think across borders.

**SUSTAINABLE**: We understand and nurture our environment, and take care of our resources, including our people and our finances. We work responsibly.

**OUR EDUCATION**

Recognised as the Scottish University of the Year in the Times and Sunday Times Good University Guide 2019, we remain true to our roots as an ancient Scottish university, combining breadth and depth in our degree programmes and drawing strength from the quality of our research. Our flexible curriculum encourages students to grow as independent learners and therefore to thrive as graduates in the diverse workplaces of the future and become change-makers across the globe. Our education is open to all and we are setting ambitious targets to further widen access.

**OUR RESEARCH**

Researchers at the University of Aberdeen have been at the forefront of innovation and excellence throughout the centuries, generating insights in medicine, science, engineering, law, social sciences, arts and humanities. This research has contributed to five Nobel prizes as well as other awards such as the Queen’s Anniversary prize. Our research is intellectually rigorous, working within our established areas of excellence as well as new methods of enquiry. We will continue to generate new knowledge addressing economic and societal issues with ambition and imagination, ensuring that it is globally excellent and locally relevant.
ABERDEEN AND ABERDEENSHIRE

With a population of approximately 230,000, the city stands between the Rivers Dee and Don. This historic city has many architectural splendours and the use of its sparkling local granite has earned Aberdeen the name of the Silver City. Recognised as the energy capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live.

Aberdeen enjoys excellent communication services with other European cities - e.g. flying time to London is just over one hour with regular daily flights. There are direct air links to London (City, Heathrow, and Luton), Manchester, Birmingham, Leeds, Southampton, Belfast and East Midlands within the U.K. There are also flights to international hub airports: Amsterdam (Schiphol), and Paris (Charles De-Gaulle as well as flights to other European destinations. http://www.aberdeenairport.com Road and rail links are also well developed.

The Grampian Region which took its name from the Grampian Mountains has a population of approximately 545,000. It is made up of five districts – Aberdeen, Banff & Buchan, Gordon, Kincardine & Deeside and Moray. The city and the surrounding countryside provide a variety of urban, sea-side and country pursuits. Aberdeen has first class amenities including His Majesty's Theatre, Music Hall, Art Gallery, the P&J Arena, Museums, and Beach Leisure centre. Within a short time, beach pursuits, equine activities, salmon, trout and sea fishing, hill-walking, mountaineering, golf, sailing, surfing and windsurfing can be reached. The city and the surrounding countryside are repeatedly given high ratings for quality of life in surveys.

Aberdeenshire is one of Scotland’s most appealing regions. Royal Deeside and the Cairngorms National Park are within easy access of the city, and there are a variety of towns and villages scattered along the coastline.

Aberdeen and Aberdeenshire cater for a wide range of tastes in sporting and cultural activities.

To find out more about Aberdeen and Aberdeenshire go to www.visitabdn.com
EQUALITY & DIVERSITY

The University values a diverse working environment and recognises the benefits this can bring. The University is keen to receive applications from individuals from across all of the equality protected characteristics (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation).

The University supports opportunities for flexible working for a range of reasons and has policies in place to facilitate this. The policies can be found here: [https://www.abdn.ac.uk/staffnet/working-here/flexible-working–5607.php](https://www.abdn.ac.uk/staffnet/working-here/flexible-working–5607.php)

The University’s commitment to gender equality has been recognised through the achievement of an Athena SWAN Bronze award at institutional level and across all its subject areas. The University is also a Stonewall Diversity Champion to further LGBT+ equality.

The University is signed up to Advance HE’s Race Equality Charter, affirming the University’s commitment to the charter’s aim of improving the representation, progression and success of minority ethnic staff and students within higher education.

Candidates who are British Sign Language (BSL) user can contact us directly by using contact SCOTLAND-BSL.

The University is delighted to be accredited as a Disability Confident employer and strives to ensure that disabled staff and students have the opportunity to work and study in an inclusive, accessible and supportive environment.


HOW TO APPLY

Applications should include a curriculum vitae and personal statement of no more than two sides of A4, outlining your reasons for making an application.

Online application forms are available at [www.abdn.ac.uk/jobs](http://www.abdn.ac.uk/jobs)

The closing date for receipt of applications is 11 March 2021

Should you wish to make an informal enquiry please contact Dr Astley Hastings, Reader.

[astley.hastings@abdn.ac.uk](mailto:astley.hastings@abdn.ac.uk)

Please do not send application forms or CVs to Dr Hastings

Please quote reference number SBS089RX on all correspondence