



## Radioactivity and the Environment (RATE) Announcement of Opportunity

### Call for RATE Knowledge Exchange Fellowship

Announcement of Opportunity published: 31st January 2018

Call opens on JeS: 20<sup>th</sup> February 2018

Deadline for applications on JeS: **16.00 17<sup>th</sup> April 2018**

Interviews: To be confirmed

#### Summary

The Natural Environment Research Council (NERC), Environment Agency (EA) and Radioactive Waste Management (RWM) wish to appoint a Knowledge Exchange (KE) Fellow for the [Radioactivity and the Environment](#) (RATE) Programme. This is an exciting opportunity to become a NERC KE Fellow focused on gaining impact from the excellent science outputs from the RATE programme. The purpose of this fellowship is to generate impact from RATE science, accelerating and amplifying economic impact and improvements in quality of life by working with business, civil society organisations and government bodies. The Fellow will do this by sharing and enabling a flow of knowledge and expertise between NERC funded researchers and user communities.

Applications are welcomed on a full or part time basis (between 60% and 100% FTE). Ideally the Fellowship will commence summer 2018 with a duration of two years. Funding up to a maximum cost of £70k at 80% Full Economic Cost (FEC) per annum is available for this Fellowship. Any career stage and salary level may apply with the expectations of achievement adjusted accordingly.

#### Background

The Radioactivity and the Environment (RATE) programme is a strategic research investment led by NERC with co-funding from the Environment Agency (EA) and Radioactive Waste Management (RWM). The overarching aim of the RATE programme has been to build UK capacity in environmental radioactivity and conduct world class research that makes a major contribution to the understanding of environmental protection and safeguarding of human health from releases of radioactivity from nuclear power plants, waste repositories and legacy-contaminated sites, as well as natural radiation.

In addition the programme was aimed at addressing the following user challenges:

**The change from radiation protection centred solely on humans to understanding the effects of radiation exposure in a wide range of organisms including Representative Animals and Plants (RAPs<sup>1</sup>).** In addition to current and new build, the UK has a substantial legacy of contaminated sites that could release radiation into the environment, leading to exposure to humans and non-human biota. There are opportunities to further our knowledge of the pathways and transfer of radionuclides in terrestrial and aquatic systems and the effects of radiation releases on organisms.

**Plans to develop a UK repository for deep geological disposal of higher activity wastes.** Potential UK sites for a repository may have relatively complex geological formations and detailed studies will

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<sup>1</sup> ICRP, 2008. Environmental protection — the concept and use of reference animals and plants. ICRP Publication 108 Ann. ICRP 38, 4e6.

require techniques for non-intrusive characterisation of the geosphere, developing understanding of the temporal evolution of the geosphere on waste-derived gas generation and migration, pathways of contaminated groundwater, and solution-solid interactions of radionuclides. To meet regulatory permits for disposal, RWM will need to understand the impacts of the very low levels of radioactivity that may, on timescales of many millennia, return to the environment. The health effects of these low levels of radioactivity on humans and non-human biota both need to be adequately understood, contextualised in consideration of uncertainties associated with potential timescales.

**A programme of UK new build nuclear power plants that will require detailed environmental assessments, including evaluation of impacts as mandated by environmental regulations.** There is a need to secure new data sets and to improve our current modelling capability to help inform environmental assessments with the knowledge that nuclear energy will likely play some part in a world where global population levels continue to increase.

To address these challenges, three consortium projects (HydroFrame, LO-RISE and TREE) have been funded through the RATE programme. These consortium projects started in the autumn of 2013 and are funded for five years.

#### **Hydromechanical and Biogeochemical Processes in Fractured Rock Masses in the Vicinity of a Geological Disposal Facility for Radioactive Waste (HydroFrame)**

Lead Investigator: Professor Robert Zimmerman

Imperial College London

Email: [r.w.zimmerman@imperial.ac.uk](mailto:r.w.zimmerman@imperial.ac.uk)

#### **Long-lived Radionuclides in the Surface Environment (LO-RISE) - Mechanistic Studies of Speciation, Environmental Transport and Transfer**

Lead Investigator: Professor Francis Livens

The University of Manchester

Email: [francis.livens@manchester.ac.uk](mailto:francis.livens@manchester.ac.uk)

#### **TTransfer - Exposure - Effects (TREE): integrating the science needed to underpin radioactivity assessments for humans and wildlife**

**Website:** <http://tree.ceh.ac.uk/>

Lead investigator: Professor Nick Beresford

NERC Centre for Ecology and Hydrology

Email: [nab@ceh.ac.uk](mailto:nab@ceh.ac.uk)

#### **Scope of the Fellowship**

The aim of the fellowship is to maximise impact from the RATE programme, accelerating and amplifying economic impact and improvements in quality of life. This will be achieved by working with business, civil society organisations and government bodies and through collaborative working with the individual research consortia (until research consortia reach completion) and the RATE Science Coordination Team (SCT). The focus is on:

1. Communication and application of the science delivered from the RATE research programme to a variety of users, including policy makers, government agencies and industry.
2. Building on the legacy of RATE by fostering collaborative working both nationally and internationally to ensure the science can have the greatest impact.
3. Sharing of best practice across the research consortia in areas such as data integration, methodology and policy linkage.
4. Linking and drawing upon the common areas of the research consortia to use RATE as the lens through which to focus lessons for further research on radioactivity and the environment.

The fellow will operate at the 'programme-level', building on and complementing, but not duplicating or replacing, SCT or consortia Knowledge Exchange (KE) activities, such as those outlined in the SCT KE Plan and consortia Pathways to Impact.

### **Work plan and activities**

Applicants should consider the approaches required to best meet the above aim, both within the RATE research programme and its broader context. The consortia have themselves undertaken activities to consolidate and integrate research findings, so the role of the KE fellow is to strengthen and increase the impact of the programme as a whole. The fellow will be expected to develop a work plan with clear activities and deliverables, which bring added value to the programme. Applicants may seek advice from the RATE SCT and consortia leads, however we expect applicants to produce their own work plan for submission.

Activities are likely to include:

- Developing and fostering partnerships with users, to understand where outputs (e.g. knowledge, data, models, skills, capability) gained through the RATE programme will be of value.
- Synthesising and packaging research outputs, and providing data, briefings and reports, in an appropriate and accessible format to help users to understand what NERC has to offer in the field of radioactivity and the environment.
- Working with policymakers and regulators to ensure that policies and frameworks are developed from a sound evidence base.
- Capturing evidence from successful examples of applied environmental science in this area for the generation of impact case studies.
- Enabling information sharing and communication across and between the consortia and to ensure that they are able to share best practice in areas such as data development, integration and management, and policy linkage.
- Advancing both knowledge dissemination and the sharing of best practice the Fellow could scope and form novel networks of researchers, practitioners, business users and other stakeholders to support knowledge exchange.
- Ensuring that the NERC community are well represented and included at relevant externally facing workshops or stakeholder engagement activities.
- Identifying potential opportunities for future investment and where appropriate develop bids to support new ideas and innovations.

The KE fellow may use a range of tools and mechanisms such as workshops, round tables and seminars to bring researchers and users together to exchange information, skills and techniques.

The fellow may also want to commission 'data development' where there are substantial amounts of data generated from research which needs to be developed and synthesised to be more easily available or meaningful to potential users. This data development is expected to be interpreting the data already generated from the RATE programme and adding intellectual value to it and as such would be categorised as an information product<sup>2</sup>. Therefore it is anticipated that the data development products will be subject to NERC Licensing and Charging Policy rather than the NERC Data Policy.

### **Reporting, management and governance requirements**

The Fellow will liaise with the RATE Science Coordinator, who will be responsible for oversight of their activities. They will also be required to submit annual reports via ResearchFish. They will operate as part of a UK-wide, NERC Knowledge Exchange Fellows network, to source and share information and

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<sup>2</sup> For further information see: <http://www.nerc.ac.uk/research/sites/data/policy/datapolicy-guidance/>

good practice. Training courses and attendance at events is offered as part of any NERC KE Fellowship. Early career KE Fellows are also offered experience in being on NERC assessment panels for smaller value awards to build up their portfolio of practice

They will be expected to participate in monitoring, training and networking activities, including:

- regular progress monitoring with the RATE Science Coordinator, Joanna Wragg;
- contact with members of RATE consortia (until research consortia reach completion);
- attending meetings of the RATE Programme Executive Board (PEB) as appropriate; and
- attending network meetings with other KE fellows who are working on other NERC projects.

### **Who should apply?**

Applicants are welcome from the NERC community at all stages of their careers.

### **Eligibility criteria**

Applicants must be a resident in the UK and be employed by an eligible UK Research Organisation (Higher Education Institution, Research Council Institute or a recognised Independent Research Organisation) as stated in the [NERC Research Grants Handbook](#). This can either be an applicant's current place of work or one where it has been agreed that they can be employed for the duration of the fellowship. Employment terms and conditions of the fellowship will be analogous to those of their host institution.

### **Funding**

Up to £140k is available for this call and the RATE programme aims to support one fellowship within that budget for a duration of two years.

The fellowship will be paid pro-rata at 80% FEC in the same way as NERC Research Fellowships. Payments will be made quarterly to the host institution via the NERC profile payments system. Resources to support the Fellows' activities are eligible where these are demonstrably essential to knowledge exchange and co-ordination with the research consortia. These could include but are not limited to:

- travel and subsistence;
- establishing clubs, networks or similar; and
- events such as conferences, workshops, seminars, open days or user training.

### **Accompanying documents that should be read in conjunction with this announcement**

Further detail on the RATE programme can be found at:

<http://www.nerc.ac.uk/research/funded/programmes/rate/>

<http://www.bgs.ac.uk/rate/>

### **Application process**

***Closing Date: 16.00 on 17<sup>th</sup> April 2018***

Full proposals must be submitted using the Research Councils' Joint Electronic Submission system (Je-S). Applicants should select:

- Council- 'NERC'
- Proposal Type - 'Standard'
- Scheme – 'Innovation People'
- Call – 'KE Fellows APR18'.

Applicants must ensure that their proposal is received by NERC by 4pm on the closing date (at which

point the Je-S portal closes). Applicants should leave enough time for their proposal to pass through their organisation's Je-S submission route before this date. Any proposal that is incomplete, or does not meet NERC's eligibility criteria or follow NERC's submission rules (see [NERC Grants Handbook](#)), will be office rejected and will not be considered.

All attachments, with the exception of letters of support and services/facilities/equipment quotes, submitted through the Je-S system must be completed in single-spaced typescript of Arial size 11 point with margins of at least 2cm. Please note that Arial narrow, Calibri and Times New Roman are not allowable font types and any proposal which has used either of these font types within their submission will be rejected. References and footnotes should also be at least 11 point font and should be in the same font type as the rest of the document. Headers and footers should not be used for references or information relating to the scientific case. Applicants referring to websites should note that referees may choose not to use them.

Applicants should ensure that their proposal conforms to all eligibility and submission rules, otherwise their proposal may be rejected without peer review. More details on NERC's submission rules can be found in the [NERC research grant and fellowships handbook](#) and in the [submission rules](#) on the NERC website.

Please note that on submission to council ALL non PDF documents are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

Additionally where non-standard fonts are present, and even if the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc), the document should be converted to PDF prior to attaching it to the proposal.

#### *Notes on completing the Je-S form*

- **Project Details**

Project Title - State that you are applying for the RATE KE Fellowship in the title.

- **Beneficiaries**

Identify the key users who will benefit from your programme of work and what impacts this may generate. This may be economic benefits or those that increase the quality of life, or generate changes in policy. You should consider how your project will enhance the impact of the NERC funded science from the RATE programme. Think about how you will connect with the most suitable people in the NERC community to generate impact.

- **Resources**

You may not know what costs the KE Fellowship will incur because to a large extent it will depend upon the requirements of the user community or programme. Costs will be funded at 80% FEC – please do not use the exceptions tick box. Directed Knowledge Exchange Fellowships have their overheads paid to their host institution in the same way that Research Fellowships do. This is because Directed KE Fellows work across the NERC community and their host institution may not receive any direct benefit.

- **Attachments**

The only attachments we require are:

- **Case for support**- outline your ideas of how you will undertake this role (4 sides A4 max)
- **CV** – please attach your CV (2 sides A4 max)
- **Justification of Resources** – (2 sides A4 max) explain why you need funds for activities making reference to your project objectives.

- **Head of Department Statement-** (2 sides A4 max) It is helpful for the selection panel if the HoD's statement can explain where the KE Fellow would fit into broader university department or school KE objectives and existing partnerships. It does not necessarily need to be the HoD, someone who can give a strategic viewpoint will also be suitable. This supporting person may need to attend the interview with the applicant or be available at the end of a phone.
- **Work plan** – Outline the timeline for carrying out the fellowship (2 sides A4 max).
- **Letters of Support** – Upload letters of support. These need to be from organisations who are offering support in cash or support in kind and who will be engaged in the programme of work. It is not the number of letters but the quality of the letters that the panel are looking for.

### **Interview and assessment process**

Applications will go through a two-stage process:

- A paper sift by a panel
- Interview by the panel of the prospective KE Fellow and a department/university representative.

Applicants will be assessed based on evidence of their experience and competencies, as described in this Announcement of Opportunity, and on their performance at interview. Applicants will be given brief feedback from the Panel summarising the reasons why the proposal was successful/unsuccessful in being invited to interview. Further feedback will be provided to all those invited to interview. NERC will use the recommendations of the interview panel along with the overall call requirements and the available budget in making the final funding decision.

### **Assessment criteria**

Proposals will be assessed on their potential impact **and** the suitability of the applicant to be appointed as a Fellow delivering the requirements of the RATE Programme. In their proposals, applicants should demonstrate that they have viable plans for improving the uptake of scientific knowledge in the areas covered by the RATE consortia, and should discuss the means whereby they will increase communication between the consortia and their relevant stakeholders. It is essential to give detailed project accounts in the application so that the panel can clearly visualise how the time will be used. As far as possible, applicants should provide milestones and deliverables in their project outline. Following discussion with the lead investigators of the RATE consortia, applicants should provide the names of relevant users that are known at the time as well as future possibilities. It is very important that the panel can determine that the Fellow will work effectively with the RATE Science Coordinator, all consortia and have an impact on users. The panel will expect to see evidence of the extent of interactions the applicant has had with users to date. Applications should include measures of success. If not all details are known in advance it is important to indicate where further groundwork may be required. Applicants should avoid using generic terms when the specifics are known.

### **Key dates**

Closing date for applications: **16:00 17<sup>th</sup> April 2018.**

Interviews: To be confirmed

### **Contacts**

[For further information on the KE Fellowship scheme or the application process:](#)

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For further information on RATE:

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