



## **Candidate Information Booklet**

# **Post-Doctoral Researcher Soil & Plant – 23 Month Fixed Term Contract**

**IRC300395**

Completed Application Forms must be submitted no later than 12 noon on  
Friday 29<sup>th</sup> March 2024

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### Communication between HRConnect and you

HRConnect will issue competition communications electronically. Please ensure you check your email account regularly, to make sure that you don't miss any important communications.

Please update us with any changes to your email address and home address to ensure you are fully informed at all times.

### Equal opportunities

Agri-Food and BioSciences Institute (AFBI) is an equal opportunities employer and has been awarded the Bronze Charter Mark in recognition for our commitment towards Gender Diversity and Inclusion in the workplace. All appointments will be made strictly on the basis of merit. If you have any queries with regard to this recruitment process or require any documentation in an alternative format, please contact HRConnect via email [Recruitment@HRConnect.nigov.net](mailto:Recruitment@HRConnect.nigov.net) or call 0800 1 300 330.

**We would particularly welcome applications from females and those from a Roman Catholic background.**

Feedback - AFBI is committed to providing feedback to assist the development of current and future applications.

## Recruitment overview

Thank you for your interest in our organisation. At AFBI you will find a fantastic team spirit and a commitment to the development of both you and your skills so that you can choose to have a long-term career with us.

This Candidate Information Booklet offers specific information to applicants.

Please read this document carefully in advance of submitting your application and retain it for reference throughout the recruitment process.

At AFBI, we take great pride in the work we undertake. All AFBI employees are appointed on merit on the basis of fair and open competition.

**We wish you every success in your application!**

Important dates - It is intended that interviews for this post will take place in AFBI HQ, Newforge Lane, Belfast during week commencing Monday 22<sup>nd</sup> April 2024.

Compulsory documentation - It is compulsory that all candidates invited to attend an assessment and/or interview, bring sufficient identification. Your attendance may not be permitted in instances where identification cannot be shown.

# You want to change the world. So do we.

[Agri-Food and BioSciences Institute \(AFBI\)](#) is a leading provider of scientific research and services to government, non-governmental organisations and commercial organisations. We are sponsored by our key stakeholder, the Department of Agriculture Environment and Rural Affairs (DAERA).

Our customers include a range of local, national and international commercial companies, Northern Ireland and UK Departments, Agencies and associated bodies in the European Union.

As a leading institute of research, we tackle the complex challenges of our industry through purpose-driven science. We are a community with a common goal: to leave the world better than we found it. Are we ambitious? Definitely. Are our ambitions achievable? Absolutely. AFBI has been defying scientific boundaries to create measurable, scalable and enduring solutions to agri-food and marine science complexities in Northern Ireland - and beyond - since 2006.

We are delighted that you are considering joining us.

Of all the many factors that come together to make AFBI what it is, nothing is more important than our employees. Every area of our service delivery is underpinned by a number of dedicated teams working in synchrony to ensure the provision of scientific excellence. Across our four divisions, every team member, from those on the scientific front to those working behind the scenes in one of our offices, plays an essential role in delivering our long tradition of excellence, whilst helping to propel future discoveries. Together we are better.

Our People Vision is to:

**Attract, empower and grow purpose-driven staff with the passion and capability to pursue excellence, embrace technology and cultivate innovation and change.**

**This is how we do great science.**

**Great people. Great science.**

# Environment and Marine Sciences Division

Environment and Marine Sciences Division (EMSD) is a new science division, which has been established following a review of AFBI's organizational structure. The decision to establish this new division reflects the increasing importance and amount of scientific work undertaken by AFBI in the agri-environment, marine and aquatic ecosystems areas. This division will focus on evidence based science, which is key to addressing significant environmental challenges whilst ensuring the sustainable use of natural resources and the future prosperity of the agri-food sector.

A key priority of this division is to deliver on a high impact and quality integrated programme of research spanning from 'the soil to the sea'.

## EMSD Branches

**Agri-Environment Branch** interfaces between intensive livestock production, and environmental management and regulation. This includes investigating the impacts of agricultural land use practices on soil, water and air, and identifying ways of optimizing land-based livestock production.

**Fisheries and Aquatic Ecosystems Branch** conducts research and development, monitoring and technology transfer in the area of marine fisheries stock assessment, coastal zone science, biological oceanography, marine ecosystem health, and freshwater fisheries stock assessment.

This job role sits within the **Agri-Environment Branch**.

## About the Agri-Environment Branch

Agri-Environment Branch (AEB) is one of two Branches within the Environment and Marine Sciences Division (EMSD). The aims of the Branch are to develop and sustain an integrated research effort with national and international recognition on nutrient management within agricultural systems, focusing particularly on the needs of Northern Ireland, thereby

- Developing sustainable practices within a competitive industry
- Providing a scientific basis for government policy and
- Enhancing the quality of the environment.

Environmental research in the Branch addresses land and nutrient management issues to make appropriate and efficient use of resources, while protecting the environment. The integrated research effort covers the impact of agriculture on air, soil, water quality and biodiversity. The outputs of this research have provided much of the scientific basis for the development of the Action Plan for Northern Ireland to comply with the Nitrates Directive and Derogation, Phosphorus Regulations and Water Framework Directive. The Branch undertakes basic, strategic and applied research for DAERA and other government departments and agencies, as well as commercial organisations.

Research programmes are in place within the Branch to address issues affecting the Northern Ireland Agri-food industry in relation to nutrient use efficiency, water quality, soil health, biodiversity, ammonia and greenhouse gas emissions, bioenergy and the circular economy.

Our research is currently delivered via six research programmes:

1. Air Quality & Climate Change
2. Catchment Sciences
3. Sustainable Soil Management & Crop Nutrition
4. Soil Biogeochemistry & Terrestrial Ecology
5. Agri-Environmental Technologies
6. Soil Nutrient Health Scheme (SNHS)

AEB collaborates in national and international research projects relevant to the above research programmes. An exciting post-doctoral research position is available, funded by the prestigious US-Ireland-Northern Ireland research call. The successful candidate will work within an international team of scientists from AFBI, Trinity College Dublin, Auburn University, New Mexico State University and University of Delaware, to develop and test modified biochar fertiliser products for slower release of phosphorus to plants and the environment. This project is an excellent opportunity for an early-career scientist to gain experience working within an international collaboration, on cutting-edge science. The job will primarily be based in Belfast, but opportunities for travel and spending time with project partners in the United States and at Trinity College Dublin are included in the role, along with travel to international conferences and workshops as appropriate.

# Job Information and Employee Benefits

An opportunity currently exists within AFBI for one full time, fixed term (23 months) position to be filled at Higher Scientific Officer grade.

A reserve list will exist and will be held for a period of 12 months from the date of interview, to cover any similar vacancies which may arise.

## **Salary**

Currently the salary for the post will be within the range £32,880 - £34,011 within which pay increases will be on an incremental basis provided staff performance reports are satisfactory.

Starting salary will be at the minimum of the scale.

## **Working Hours**

The successful candidate will normally be required to work 5 days each week, totalling 37 hours. AFBI operates a flexi working system.

## **Location**

The successful candidate will be based at AFBI Newforge, 18a Newforge Lane, Belfast, BT9 5PX, however, they may, on occasion, also be expected to work at other sites in Northern Ireland as required.

Hybrid working can also be considered.

## **Travel**

The post will entail travel locally, nationally and internationally and for this reason the successful applicant will require access to a form of transport which will permit them to meet the requirements of the post in full. There will be opportunities to travel to the USA for short periods to collaborate with project partners.

## **Pre-employment checks**

Pre-employment checks consist of a qualification check and an AccessNI check. The security check required for this post is basic level. HRConnect will provide your details to Experian who will undertake this check. This is a two-part process during which all communications will be issued to you electronically.

The successful postholder may be required to undertake a medical in advance of securing appointment.

## **Annual Leave**

In addition to the usual public and privilege holidays, there is an annual leave allowance of 25 days, increasing to 30 after five year's satisfactory service.

## **Probationary Period**

The post holder will serve 12 months' probation in the new post. This will commence from the date of appointment. At the end of the probation period a formal review will be conducted.

## **Professional Development**

We believe in our employees and understand the importance of investing in ongoing development. Support for professional development will always be considered.

## **Employee Benefits**

AFBI offers employees an unrivalled benefits package. For further information please click [here](#).

## **Further Information**

Further Information about the post may be obtained from, AFBI People & Culture on 028 9025 5333 [EMSDpeopleandculture@afbini.gov.uk](mailto:EMSDpeopleandculture@afbini.gov.uk)

For information on how the recruitment process will be managed and for further recruitment and selection resources, please click [here](#).

For information on our equal opportunities, please click [here](#).



# Job Background

The main duties of the post will be as follows:

## **1. Delivery of Research and Development Programmes**

The successful candidate will be required to work within an international, collaborative team of researchers to field-test engineered biochar fertiliser products. Field and glasshouse experimental protocols must be followed, as agreed with the project lead. Expertise in soil science, fertilisers, biochar products or crop nutrition is required, and the post holder should have excellent field and laboratory skills in this area. A strong track record of working in multidisciplinary teams to address soil and plant nutrition issues is desirable. Driving a vehicle is part of the duties of the post, to enable efficient transport of personnel, samples and equipment between the office and the field sites in a timely manner.

## **2. Manage staff and resources**

The successful candidate will be expected to work with a team of technical field staff, along with PhD students and other project staff. The successful candidate must comply with all relevant AFBI health and safety and staff management procedures. All resources and specialist equipment should be utilised to greatest effect and properly maintained.

## **3. Project Finances**

The successful candidate must ensure that allocated budgets are handled in a fully auditable manner, compliant with AFBI procedures, and supply appropriate financial data to project funders when required to do so.

## **4. Establish and maintain linkages with other research groups**

The successful candidate will be required to establish and maintain linkages with other research groups internationally within the project team, including US and Ireland partners. They must ensure that research is carried out collaboratively and that AFBI's research reputation is appropriately recognised.

## **5. To undertake data interpretation, the publication of results and scientific paper/report writing and dissemination of research findings to the wider industry**

All research data must be accurately collated, and appropriate statistical analysis and interpretation carried out, which will require excellent computer skills and an in depth understanding of statistical procedures. The successful candidate will be required to attend regular project meetings and contribute to the publication of research articles in high impact scientific journals along with the dissemination of research findings to project partners, government, industry, and other stakeholders as appropriate. The successful candidate will have excellent communication skills and will communicate the outcomes of the research project to farmers, stakeholders, and the scientific community, and provide a lead to policy on issues arising from the research when required.

**This list is not exhaustive, and the successful candidate will be required to carry out other duties as allocated by management.**

## Eligibility Criteria

Applicants must, by the closing date for applications provide evidence in their application form that they meet the following eligibility criteria.

- 1a. A PhD degree in soil science, environmental science, agricultural science, plant science or a related subject.

**OR**

- 1b. A primary degree in soil science, environmental science, agricultural science, plant science or a related subject plus 2 years' post-graduate field or laboratory experience in research related to soil fertility, crop nutrition or agronomy.
2. Proven ability to be first named author on at least 1 peer reviewed journal publications \*
3. Possess a full driving licence which enables the postholder to drive a car in Northern Ireland and have access to a form of transport which will permit them to meet the requirements of the post in full.

\* **Successful delivery is defined as papers either accepted for publication or published.**

**Relevant or equivalent** qualifications: give the type of qualification and date awarded (the date awarded is the date on which you were notified of your result by the official awarding body). If you believe your qualification is equivalent to the one required, the onus is on you to provide the panel with details of modules studied etc so that a well-informed decision can be made.

## Shortlisting Criteria

In addition applicants should be aware that after an eligibility sift, should it be necessary to shortlist candidates to go forward to interview, the following shortlisting criteria will be used:

1. Experience of managing staff and/or resources for the successful delivery of soil science/crop agronomy research projects.

## Person Specification

This position is analogous to Staff Officer Level in the NICS.

Candidates will be expected to demonstrate the skills and competencies set out in the Eligibility Criteria. In addition, they will also be required to demonstrate competency in Professional Knowledge & Skills pertaining to this post together with the skills and competencies set out in the Northern Ireland Civil Service (NICS) competency framework at Level 3 for the purpose of personal and professional development.

Selection panels will design questions to test the applicant's knowledge and experience in each of the above areas and award marks accordingly.

**You should refer to the behaviours listed under level 3 of the relevant competence areas.**

To view the NICS Competency Framework, please click [here](#).

## Interview Criteria

In addition to satisfying the eligibility criteria and shortlisting criteria (if applicable) applicants will also be expected to display the following qualities and skills at interview-

### **PRESENTATION**

Before the competence-based interview, candidates will be required to deliver a presentation, lasting no more than 7 minutes, the subject of which will be provided to candidates in the invitation to interview letter.

Candidates should fully prepare their presentation in advance of the interview and no preparation time will be provided on the day of interview. Your presentation should be delivered via PowerPoint, and you will be asked to submit it to HRConnect by a specific date prior to your interview. Full details will be provided should you be invited to interview.

Following the presentation, the panel may elect to ask questions on the presentation.

The presentation will be used to assess against the Professional Knowledge and Skills.

#### **1. Professional skills and Knowledge**

**Marks available: 60      Minimum Standard: 36**

#### **2. Making Effective Decisions**

**Marks available: 10**

#### **3. Leading & Communicating**

**Marks available: 20      Minimum Standard: 12**

#### **4. Collaborating and Partnering**

**Marks Available: 20      Minimum Standard: 12**

#### **5. Delivering at Pace**

**Marks Available: 10**

**Total marks available: 120  
Overall pass mark: 72 (60%)**