Candidate Information Booklet

Catchment Scientist – Senior Scientific Officer

IRC332968

Completed Application Forms must be submitted no later than 12 noon on 11th December 2026.

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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 or call 0800 1 300 330.

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, BT9 5PX during week commencing 4th January 2027.

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) was established as a separate science division in 2021 following a review of AFBI's organisational structure. The establishment of the Division reflected the increasing importance and amount of scientific work undertaken by AFBI in the agri-environment, marine and aquatic ecosystems areas.

The Division is focused on evidence-based science, which is key to addressing the significant environmental challenges whilst ensuring the sustainable use of natural resources and the future prosperity of the agri-food sector. The Division is in a unique position to deliver on a high impact and quality integrated programmes 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 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 (AEB)

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

Job Information and Employee Benefits

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 £47,304 - £49,515 (under review) 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 may entail some travel throughout the UK, Ireland and internationally. For this reason, the successful applicant must be able to travel and will also require access to a form of transport which will permit them to meet the requirements of the post in full.

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.

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 years' 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.

VISAs (if applicable)

If there is a requirement for a VISA/VISA renewal, AFBI would not be responsible for the financial costs, this would be the onus of the candidate. AFBI will however support the Certificate of Sponsorship.

Further Information

Further Information about the post may be obtained from, AFBI People Operations & Workforce Planning Advisor at 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

A permanent opportunity currently exists for a Senior Scientific Officer (SSO) to lead and develop interdisciplinary research to examine the interactions between climate, hydrology, soils, agriculture, landscape characteristics, nutrient cycling and freshwater ecosystem health across Northern Ireland. The key programme areas they will contribute to include:

1. Catchment research and monitoring

The post-holder will oversee river water quality monitoring programmes across the AFBI Catchment Research Platform, to include existing high resolution in-situ and mobile stations, and new stations as required. They will apply their skills in hydrochemistry to advance monitoring approaches covering hydrometrics, nutrients, physico-chemical parameters and other contaminants across multiple projects. They will develop and implement research to understand hydrological processes controlling pollutant mobilisation, transport and delivery from source areas to receiving waters under current and future climatic conditions.

2. Data science

The post-holder will apply skills in advanced numerical data processing and modelling (in R or Python) to process and analyse diverse large-scale spatial and temporal data sets and answer research questions relating to the link between landscape, climate and land use and water quality in Northern Ireland's river catchments.

3. Communications.

The post-holder will lead and contribute to the publication of high-quality scientific papers in peer-reviewed journals and develop AFBI's national and international reputation for excellence in catchment science. They will prepare regular written and verbal reports for project partners, funders, the science community and stakeholders as required. They will also contribute to the delivery of advice to DAERA and other Government Departments on issues relating to the impact of climate and land use practices on river ecosystems. When required, they will represent AFBI on appropriate NI, GB/UK, EU and North-South technical committees within Ireland.

4. To manage Staff and Resources.

The post-holder will help develop the catchment science work area within AFBI and manage associated scientific & technical support staff to maximise their efficiency and delivery of tasks. They will also be responsible for the management of delegated resources, operating protocols and quality aspects.

5. To undertake Continuous Professional Development.

The post-holder must maintain an up-to-date knowledge and awareness of developments in catchment science and the scientific literature. They will be provided with opportunities to build and maintain national and international collaborative links with other scientists and to attend scientific conferences and workshops to enhance their own and AFBI's scientific reputation.

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 in environmental science, geoscience, physical geography, or a discipline related to catchment science **AND** 2 years post-doctoral demonstrable experience in research related to catchment science, agricultural nutrient management and the impacts of land use practices on river hydrochemistry.

OR

1b. An Honours Degree (Level 6) equivalent or higher* in environmental science, geoscience, physical geography, or a discipline related to catchment science **AND** 4 years' demonstrable experience in research related to catchment science, agricultural nutrient management and the impacts of land use practices on river hydrochemistry.

AND

2. Two peer reviewed publications** on the topic of catchment science and the impact of agricultural nutrient management on river hydrochemistry.

3. Prior practical experience in operating, troubleshooting, maintaining and quality assuring advanced in-situ monitoring systems for high-frequency measurement of nutrients in river environments.

4. Possess a full, UK current or exchangeable*** driving licence from the list for manual vehicles, (to aid the successful candidate in driving an AFBI vehicle) enabling the licence holder to fulfil the duties of this role. As per the Disability Discrimination Act 1995 (DDA), any reasonable adjustments will be considered

Please Note:

*Equivalent or higher qualifications: Applications will also be considered from applicants with relevant formal qualifications considered by the selection panel to be of an equivalent or higher standard to those stated. 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, information proving equivalency, etc. so that a well-informed decision can be made.

**Publish is defined as papers either accepted for publication or published in a peer-reviewed scientific journal.

Applicants must provide evidence of eligibility criterion 2 by submitting a fully cited bibliography (authors, paper title, journal title, volume and page numbers) of **all** publications offered. For the papers submitted applicants must demonstrate the contribution made under the following author roles from the Elsevier Credit taxonomy: conceptualization, methodology, formal analysis, investigation, writing – original draft, and supervision.

Candidates can provide this information within the application form itself, or if necessary, it can be sent by the closing date for applications as a separate attachment to: recruitment@hrconnect.nigov.net

***Information on validity and exchange of driving licences can be found on: https://www.nidirect.gov.uk/articles/exchanging-your-foreign-driving-licence and https://www.nidirect.gov.uk/articles/advice-foreign-driving-licences-northern-ireland.

Person Specification

This position is analogous to Deputy Principal 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 applicants will also be expected to display the following qualities and skills at a competency-based 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: 20 Minimum Standard: 12

3. **Leading & Communicating**
   Marks available: 10

4. **Delivering at Pace**
   Marks available: 20

Total marks available: 110
Overall pass mark: 66(60%)