



Candidate Information Booklet

IRC258932

**Science Leader in Pathogen Genomics -
Principal Scientific Officer**

**Agri-Food and Biosciences Institute
Northern Ireland (AFBI)**

Completed Application Forms must be returned to HRConnect no later than 12 noon (UK time) on Tuesday 29th September 2020.

Agri-Food and Biosciences Institute Northern Ireland (AFBI)

Communication between HRConnect and you

HRConnect will issue electronically as many competition communications as possible, you should therefore check your email account to make sure that you don't miss any important communications in relation to this competition. There may, however, still be a necessity to issue some correspondence by hard copy mail.

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ABOUT THE AGRI-FOOD AND BIOSCIENCES INSTITUTE

As the Northern Ireland Government's main research and science provider in the areas of agri-food, fisheries and the environment, AFBI's science plays a crucial role in providing the underpinning statutory and analytical testing, research and development work, emergency response and expert scientific advice required to support the work of the Department of Agriculture Environment and Rural Affairs (DAERA) and the wider agri-food industry. AFBI's key science themes represent Leading improvements in the agri-food industry; Protecting animal, plant and human health; and Enhancing the natural and marine environments.

In line with AFBI's vision of "Advancing the local and global agri-food sectors through scientific excellence" the Institute seeks to be an influential, internationally recognised, centre for research and scientific services in the agri-food and marine sectors. AFBI's science is outcome-driven and aimed at solving important practical problems for a wide range of local, national and international funders in the public and private sectors. Our staff carry out world class research, surveillance, and analytic and diagnostic testing for a wide range of funders in the fields of animal health and welfare, sustainable agricultural systems, plant science, food innovation and safety, environmental protection, fisheries and aquatic ecosystems, and agricultural and rural economics.

AFBI's current Corporate Plan outlines our strategy and ambitions for the period 2018 to 2022. It sets out the 3 strategic outcomes we aim to deliver for society, the economy and the environment, as well as industry and customers in an ever more efficient and effective manner. The plan, demonstrates the unique multidisciplinary strength of AFBI and how we will work with partners from science, government, industry and farmers to provide a positive impact. These achievements will be underpinned by attracting and developing excellent staff and building fit for purpose physical infrastructure.

AFBI's 'Science Impacts 2020' publication outlines key outcomes from AFBI science. Notably over the past 5 years AFBI have delivered approximately four million animal, plant and food safety tests to support sales from the NI agri-food industry to the value of £3.2 billion. In that period, AFBI have also delivered >90 evidence and innovation projects for DAERA, ~400 peer review scientific publications, over two thousand outreach activities, and have secured £44m of external research grants and contracts working with partners from across 35 countries. We are also actively developing strategic alliances with other research organisation and dissemination partners to facilitate a pipeline of research from fundamental to applied and onward application to ensure the impact of AFBI Science.

In order to fulfil these outcomes for our funders and stakeholders across society, the economy and the environment, AFBI enjoys access to highly instrumented laboratory, field and ship based scientific platforms. Furthermore, we are working closely with our sponsor department to take forward an ambitious programme of capital investment in AFBI's infrastructure including a new animal health sciences building at AFBI Stormont, enhanced research

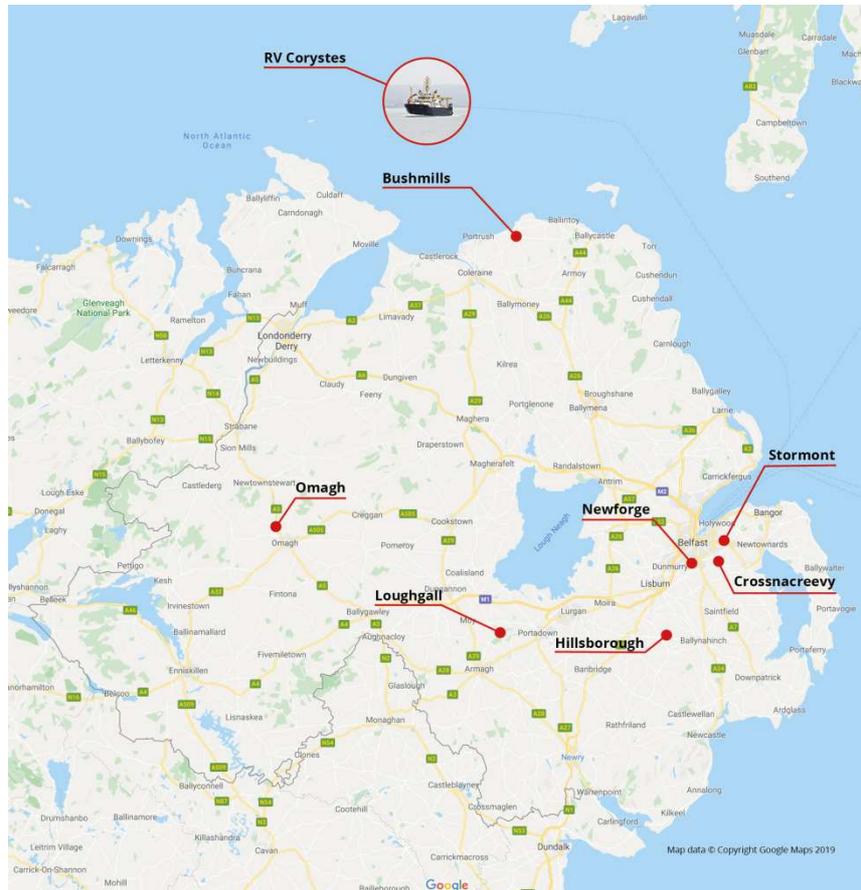
farm facilities at AFBI Hillsborough and a replacement sea-going research vessel.

AFBI has a current staff complement of approximately 700 people, with an annual turnover of approximately £60 million. We are currently organised across 3 divisions – Sustainable Agri-Food Sciences Division (SAFSD), Veterinary Science Division (VSD) and Finance and Corporate Affairs Division (FCAD). This will change with the filling of a new Director post to four divisions as outlined in subsequent sections.

AFBI SITES

AFBI is located on seven sites across Northern Ireland with its Headquarters at Newforge Lane, Belfast.

In addition AFBI has a dedicated marine research vessel, the RV Corystes, based in Port of Belfast.



- Newforge Lane (Headquarters)
- VSD Stormont
- Hillsborough
- Crossnacreevy
- Loughgall
- Omagh
- Bushmills

In addition a dedicated marine research vessel RV Corystes based in Port of Belfast.

Currently AFBI's science activities are organised across 2 divisions – Sustainable Agri-Food Sciences Division (SAFSD), and Veterinary Science Division (VSD) with Finance and Corporate Affairs Division (FCAD) delivering on Business needs. A third division (Environment and Marine Sciences Division (EMSD)) is also currently being developed

VETERINARY SCIENCES DIVISION (VSD)

VSD currently employs approximately 260 veterinary, scientific, technical and support staff across its four Branches (Bacteriology, Chemical and Immunodiagnostic Sciences, Disease Surveillance and Investigation, and Virology). The Division is predominantly based at Stoney Road, Stormont, Belfast with a smaller disease surveillance centre based at Omagh, Co Tyrone.

The Division undertakes an integrated programme of statutory, disease surveillance, emergency response and research and development (R&D) work on the diseases of major animal and human health significance along with significant programmes of work on the chemical and microbiological safety of food. The work supports government policy and disease eradication and control programmes in areas such as bovine tuberculosis, food-borne zoonotic infections and transboundary diseases.

VSD also provides a disease investigation service, covering all of the major farm animal species and fish and provides commercial laboratory services in support of industry-led disease eradication and control programmes. The work of the Division is underpinned by R&D on animal diseases and food safety issues relevant to the local industry.

One of the key roles of the Division is in delivering a laboratory response to local, national and international emergencies involving animal diseases and food and feed contamination incidents. This is in support of government and industry and includes contingency planning and exercising, horizon scanning, R&D of laboratory methods, incident response and management, as well as expert scientific advice to government and industry.

A key strength of the Division is its multidisciplinary skill base, which includes expertise in traditional disciplines such as pathology and microbiology, along with cutting-edge molecular and chemical analytical capacity and capability. Our facilities include ACDP and SAPO Containment Level 3 laboratories and experimental animal facilities. Significant capital investment is also planned for the Stoney Road site, with design work underway for a new animal health sciences building which will provide replacement CL2 laboratory, *post-mortem* examination and ancillary office accommodation.

The main areas of work of VSD Branches are outlined below.

Bacteriology Branch

Bacteriology Branch is located in a modern building, which houses suites of laboratories at bio-containment levels 2 and 3. The Branch work programme includes statutory, analytical and research work on the major bacterial pathogens of animal and public health significance. Much of this work underpins important DAERA animal disease control programmes in areas such as bovine tuberculosis, brucellosis and salmonellosis. Other work areas include food-borne zoonoses, antimicrobial resistance and paratuberculosis. The skill base within the Branch comprises traditional and specialist bacteriology methods, molecular diagnostics, test development, molecular epidemiology, experimental infection models, immunology, genetics, experimental design,

wildlife ecology, veterinary epidemiology and data sciences. Multi-disciplinary approaches to bovine tuberculosis and the detection and control of *Campylobacter* are currently major research focuses of the Branch. Bacteriology Branch incorporates the National Reference Laboratories (NRL-UK-NI) for Brucellosis and the NRL-UK-NI for *Salmonella*. Laboratory tests in support of statutory disease control are accredited and audited externally to ISO17025 and projects are managed and audited externally to ISO9001 certification standard. The Branch has a major international reputation for research and innovation and works with a range of external industry and academic collaborators. Research funding sources include DAERA, the UK research councils and the EU.

Chemical and Immunodiagnosics Sciences Branch (CISB)

The Chemical and Immunodiagnostic Sciences Branch undertakes a wide programme of mainly statutory work in the animal disease and chemical residues/contaminants areas. The Branch has EU NRL status for illegal veterinary drug residues, and provides screening and confirmatory analysis for a wide range of veterinary drug residues, marine biotoxins, pesticides, mycotoxins and heavy metals. Tests are carried out for residues in meat products from cattle, sheep, pigs, poultry, shellfish and fish, milk and eggs, as well as animal feeding-stuffs. This work is supported by basic and strategic research that has resulted in the development of novel analytical methods for a wide range of compounds. A large volume of serological testing is carried out in CISB on behalf of DAERA and industry customers. This work includes serological testing in support of DAERA's brucellosis eradication programme, surveillance for exotic diseases such as enzootic bovine leucosis, bluetongue virus and highly pathogenic avian influenza, equine viral serology, avian viral and *Mycoplasma* serology and testing required for the export/import of animals. The Branch also encompasses a transmissible spongiform encephalopathy (TSE) testing unit. The Branch provides DAERA and Food Standards Agency (FSA) with an emergency response in the event of outbreaks of major epizootic diseases, marine biotoxin incidents and misuse of veterinary drugs, pesticides or chemical contaminants.

Disease Surveillance and Investigation Branch (DSIB)

The animal disease diagnostic services provided by the AFBI Stormont and Omagh laboratories safeguard animal and public health by identifying the causes of disease in submitted material and promote the competitiveness of the agri-food industry. Surveillance for notifiable, zoonotic (transmissible to humans) and emerging diseases forms an important part of this work. A comprehensive range of laboratory tests is available to assist in the diagnosis of animal disease and to provide detailed information on the health status of herds and flocks. Specialist advice on animal diseases is given to the agricultural industry and veterinary profession. A high throughput of diagnostic work allows AFBI to identify outbreaks of notifiable diseases, new or emerging diseases, changes in patterns of endemic diseases and conditions appropriate for further research. These activities underpin the animal health status of Northern Ireland. DSIB also operates the AFBI Cattle Health Scheme, which provides voluntary eradication of certification disease control programmes. Benefits of this scheme include improved disease control, improved profitability,

advice on biosecurity and certification of cattle health status with regard to bovine viral diarrhoea (BVD), infectious bovine rhinotracheitis (IBR), leptospirosis, neosporosis and Johne's disease.

Virology Branch

The work of the Virology Branch is aimed at improving the diagnosis and control of viral diseases of farmed animals (pigs, poultry, cattle, sheep and aquaculture) in support of DAERA policy objectives on animal health and welfare of N. Ireland livestock. Through its research programme, the Branch aims to develop or improve diagnostics for a range of virus infections, particularly exotic viruses which pose a potential threat to the local industry; to provide or improve vaccines for the control of viral diseases and to investigate new disease syndromes of potential viral etiology, with the aim of providing new diagnostics and control measures. The Branch has responsibility for the molecular confirmation of major infectious / epizootic diseases in animals and provides a range of support services to other Branches, such as tissue culture and the animal services unit. Virology staff provides expert scientific advice to DAERA on animal health issues, including the statutory testing programmes for animal diseases, emerging animal health risks and emergency responses to epizootic disease incidents. The skill base within the Branch comprises traditional and specialist virology methods, molecular diagnostics, test development, experimental infection models, immunology, experimental design and access to veterinary epidemiology and genomics. The Branch has a major international reputation for research and innovation and works with a range of commercial, government and university research organisations. Research funding sources include DAERA, commercial companies, UK research councils and the EU.

AFBI's other science and Finance and Corporate Affairs divisions are as follows:-

SUSTAINABLE AGRI-FOOD SCIENCES DIVISION (SAFSD)

SAFSD is a highly multidisciplinary division with a focus on livestock, plant and in general agriculture production, its impact on the environment and the economy and the sustainable management of aquatic systems, both inland and at sea. This multi-disciplinary team of over 320 staff are sited across AFBI Newforge, Hillsborough, Loughgall, Crossnacreevy and Bushmills sites and conducts science across all aspects of the food supply chain, taking research from the soil through to the plant, the animal and the resultant food quality and nutritional value, while also working with colleagues at VSD to ensure animal health and food safety is optimised. A key element of the work also examines quantitative and qualitative socio-economic impacts.

SAFSD utilises a highly instrumented platform across livestock, land management, environmental management, as well as marine work, to service its main deliverables of research, innovation, monitoring and surveillance. SAFSD also collaborates extensively with other research organisations, industry and government departments locally, nationally and internationally. A key driver within SAFSD is the production of high quality peer-reviewed publications, while also ensuring the research conducted has impact through an active dissemination and outreach programme.

ENVIRONMENT AND MARINE SCIENCES DIVISION (EMSD)

The Environment and Marine Sciences Division (EMSD) is a new science Division, which is being created following a review of the organisational structure. It will comprise two areas, which have in recent years been part of the Sustainable Agri-Food Sciences Division.

The areas of work, which will fall within EMSD, currently have approximately 120 scientific, technical and support staff. Divisional budget responsibility is anticipated to be approximately £5M staff budget, consumable and other direct expenditure of ~£5-6M and an external (non-DAERA) income generation target of ~£5M.

FINANCE AND CORPORATE AFFAIRS DIVISION

The Finance and Corporate Affairs Division (FCAD) currently employs approximately 100 staff across its Branches. The Division is based primarily at AFBI Headquarters, Newforge Lane, Belfast but with staff deployed at some of the larger sites.

The Division supports the AFBI Chief Executive and Executive Management Team (EMT) in securing and deploying the financial, people and infrastructure resources of AFBI. The Division has a key role in ensuring that AFBI is an efficient, effective, sustainable and accountable organisation, with high standards of corporate governance.

The Division currently has five senior post holders, reporting to the Director of Finance & Corporate Affairs, namely: Head of Finance, Head of Corporate Affairs, Head of Corporate Communications, Head of Human Resources and Head of Research Support. This senior team has the responsibility for leading and providing the support services across the Institute.

BACKGROUND TO THE POST

The PSO post of –‘Science Leader in Pathogen Genomics’ is a key role to drive the delivery of AFBI’s Genomics Strategy. This post will complement AFBI’s recently-appointed quantitative geneticist, as well as a wide multi- and interdisciplinary team of scientists and research platforms across AFBI’s animal and plant health remits. This post represents an exciting opportunity for an individual to join AFBI and lead capability and capacity building to deliver the ‘modernising microbiology’ agenda by developing and leading a programme of pathogen genomics research and service delivery across AFBI, to include implementation of appropriate bioinformatics resource and support that will enable competitive pathogen genomics research and service delivery at AFBI in the forthcoming years.

This position offers the opportunity to join a well-established, multi-disciplinary team of senior researchers and will be based primarily in the Bacteriology Branch at VSD Stormont. The post-holder will be expected to collaborate productively with researchers within other Branches across AFBI, spanning animal health and welfare and plant health remits. Given AFBI’s research linkages and collaborations, such as its strategic alliance with Queens University, Belfast; through its membership of the Centre of Innovation and Excellence in Livestock (CIEL), its current international collaborations in the UK, Ireland and other European countries and those it is building in the USA, Canada and China, there is extensive opportunity to be productively involved in exciting collaborative research.

AFBI undertakes a wide range of molecular and genomic tests and analyses to support the control of infectious diseases in livestock, wildlife and plants. Such approaches include pathogen discovery, pathogen detection, pathogen characterization and epidemiological tracing, including phylogenetics analyses. There is also research interest in understanding and exploiting the population genetics of pathogens, plants and animals, including livestock, fish and wildlife populations. Collaborative, quantitative and molecular genetics research continues to be undertaken to better understand the genetics of host resistance to infectious diseases. Furthermore, a growing responsibility for AFBI is the surveillance and potential research into antimicrobial resistant (AMR) bacteria.

Facilities

The work area is supported by well-equipped, specialist, molecular biology laboratories, including dedicated PCR core facilities, capable of analysing host and pathogen DNA (genotyping) and has Sanger DNA- and pyro-sequencing facilities, microsatellite genotyping facilities and a bench-top Illumina MiSeq ‘next-generation’ sequencing instrument and dedicated 48 core server with 2 Tb of available RAM capable of supporting pathogen whole-genome sequencing and allied bioinformatics and phylogenetics analyses. IT facilities are managed by a dedicated AFBI Biometrics team and AFBI can secure approved access to detailed animal-level location, movement and test data.

KEY RESPONSIBILITIES

The post holder will report to the Head of Bacteriology Branch, within the Veterinary Sciences Division, at Stormont.

This post will play a central role in leading and managing a high-priority AFBI project to modernise microbiology by developing a high-level programme of pathogen genomics research, including the establishment, development and maintenance of the disruptive technology of pathogen whole-genome sequencing (WGS) and associated bioinformatics workflows to support existing and future needs across AFBI. This will include further developing and modernising the pathogen genomics research and service delivery undertaken across AFBI, expanding the wide range of molecular and genomic tests and analyses conducted across AFBI to support the control of infectious diseases in livestock, wildlife, fish and plants. Such approaches include WGS-based approaches, pathogen discovery, pathogen detection, pathogen characterization, analyses of host-pathogen interactions, comparative genomics and epidemiological tracing, including phylogenetics and phylodynamics analyses. Research interests also include understanding and exploiting the population genetics of pathogens and their hosts (livestock, wildlife, fish and plants). Collaborative, quantitative and molecular genetics research continues to be undertaken to better understand the genetics of host resistance to infectious diseases.

As noted, the post-holder will work across a range of AFBI science themes which includes the following **work areas**:

1. Development and deployment of molecular detection and epidemiological typing techniques for major veterinary, food-borne and plant pathogens. Application of these tools provides important new insights into disease epidemiology, ecology and evolution and provides high-resolution tools for investigating outbreaks.
2. Development and deployment of molecular tests in support of animal and plant pathogen characterisation. For example, molecular methods to determine *Salmonella* spp. designation complement more traditional serotyping methodologies. In addition, PCR-based methods to detect the mobile DNA elements and plasmids associated with AMR in a variety of pathogens are performed. In future, much of this work will be delivered by pathogen whole-genome sequencing (WGS) and associated bioinformatics which will capture data for use in determining pathogen species, phenotype and epidemiology.
3. Deployment of microsatellite DNA profiling technologies in cattle, wildlife and plants, which is increasingly used to support efforts to characterise the disease ecology and behaviour of pathogen hosts.
4. Data management of associated WGS, genotypic and associated meta-data, with particular reference to maintenance of large molecular epidemiological datasets, mapping, detailed reporting of trends, outbreak investigations and rational selection of specific samples for future collaborative studies.

The main duties of the post will include the following:

Lead a nationally-important and internationally-relevant animal and plant health programme based on pathogen genomics

- To support the “modernizing microbiology” agenda as AFBI increasingly transitions from routine molecular-based testing to genomics-based services and research and support improvements to the existing infrastructure to meet business needs.
- To provide scientific leadership to and management of the pathogen genomics programme across AFBI, although principally based in Bacteriology Branch, including the establishment, development and maintenance of pathogen WGS and bioinformatics workflows to support existing and future research and diagnostic surveillance needs.
- To be responsible for the development, provision, forward planning, and expansion of research, surveillance, statutory diagnostic and pathogen genomics advisory services across AFBI’s animal and plant health remits.
- To achieve a competitive, time-bound pathogen genomics analysis service to internal and external collaborators and stakeholders, including budget and facilities management, invoicing and tendering.
- Management and delivery of DAERA- and externally-funded pathogen genomics scientific work on time and to budget including the Assigned Work Programme, Emergency Response requirements, E&I projects, externally-funded research and commercial projects.
- Provision of specialist advice to AFBI senior management, liaison with and advising DAERA, other government departments and bodies external to government, including farming and industry groups.
- Ensure that all pathogen genomics-based diagnostic and research activities comply with appropriate formal quality standards (currently ISO9001 certification and ISO 17025 accreditation), health & safety, biocontainment, biotransport and associated issues within the Branch.

Develop an internationally renowned and extramurally-funded research and development programme in pathogen genomics and associated bioinformatics analysis.

- Conceive and conduct own science, including recruitment and supervision of student (undergraduate and graduate) and postdoctoral staff, in an area of pathogen genomics in the pursuit of scientific excellence in order to grow the profile of AFBI science and sustain or grow AFBI income.
- Further build and develop a nationally-recognised and productive pathogen genomics research team – in areas such as animal health and contribute to, plant and fish health – with close links to industry and academic partners to secure income from a wide range of funding bodies (including DAERA, industry and EU commission) to deliver a Research & Development programme.

- Initiate proposals to DAERA, the European Commission, industry and other suitable funding sources for strategic and applied research on commercially-important pathogens.
- Peer-reviewed publication of pathogen genomics research results in high impact scientific journals, R&D project report writing, knowledge transfer activities and press articles. Keep up-to-date with the scientific and associated grey literature and media on relevant aspects of pathogen genomics. Communicate key findings to AFBI seniors and relevant stakeholders.

Organisation and branch leadership and strategic direction setting

- Develop a pathogen genomics strategy in collaboration with the Head of Branch and other project leaders to meet organisational objectives for funding, research and development.
- To liaise with colleagues in AFBI to forge strong, meaningful collaborations in pathogen genomics, joint business cases and extramural funding bids in the areas of animal and plant health.
- Support and assist the Head of Bacteriology Branch, developing strategic management decisions and initiatives, maintaining high standards of corporate governance, budget planning and control and staff management, and responding to AFBI senior managers and DAERA Policy leads.

Manage staff, resources and facilities

- Lead the pathogen genomics team, which undertake national and international animal and plant pathogen diagnostic and research work with an expense budget of around £400,000 per year.
- To generate income from DAERA and external sources to support the development of a pathogen genomics programme at AFBI and deliver tangible impacts to the agri-food sector both locally and internationally.
- Ensure that resources, including staff, are managed in line with AFBI governance policies and procedures to achieve a high quality and competitive time-bound pathogen genomics service to customers.
- Undertake and support appropriate Continued Professional Development. Facilitate the strategic positioning of the team to keep abreast of new innovations and science discoveries in pathogen genomics.
- Ensure that all team activities are undertaken safely and in accordance with AFBI H&S and corporate policies and procedures.
- Encourage continuous improvement, employee wellbeing and safe practices and employee participation.
- Ensure that all diagnostic surveillance, testing and research activities comply with appropriate formal quality standards (ISO9001, or ISO17025).

To establish links and collaborative working opportunities with national and international research groups and stakeholders

- Ensure effective communication across the team is maintained with relevant stakeholders including research end-users, funders, research collaborators, and colleagues.
- To provide expert scientific advice to DAERA animal health/Policy leads, other government departments and external customers in the area of animal and plant health / pathogen genomics and to guide the strategic direction of the team in this area to meet future needs.
- Support the long-term continuation of animal and plant health / pathogen genomics research and service delivery through opportunity identification and revenue-generating activities, including relationship-building internally within AFBI and externally with customers and stakeholders.
- To play a leading role in establishing a centre of excellence to enable AFBI to harness the potential of pathogen genomics across the diverse data streams and remits of AFBI.
- To represent AFBI and DAERA at UK animal health meetings and at regional technical experts groups and scientific meetings.

To undertake continuous professional development

To demonstrate personal development in all relevant areas of managing staff and resources and to undertake training as required. The post holder will be required to fulfil any other duties and responsibilities as determined by management that fall within the remit of the post. The job description is not intended to be rigid and inflexible. Rather, it should be regarded as working guidelines within which the post holder will work.

To fulfil other duties

The post holder may be required to fulfil other duties and responsibilities as determined by management including as part of the Institute's response to major epizootic disease, food-chain or other emergency situations. They may also be required to teach university or other students, deliver talks to groups of industry representatives and carry duties under the Animals Scientific Procedures Act. Applicants should be aware that they may also be expected to handle blood samples and/or animal tissue samples which may be contaminated with transmissible diseases.

The job description is not intended to be rigid and inflexible. Rather, it should be regarded as working guidelines within which the post-holder will work.

The successful applicant will be required to travel locally, nationally or internationally in order to perform the duties of the posts. They will also be required to occasionally work outside of normal office hours including weekends.

The above is not meant to be an exhaustive or prescriptive list but to provide a good indication of the main duties of the post. The emphasis on particular duties will vary over time according to business needs.

JOB DESCRIPTION

There is currently one full time permanent position to be filled. A reserve list will exist and will be held for a period of 12 months from the date of interview, to cover any further vacancies which may arise.

Salary

The salary for the post will be within the range £49,806 - £54,588 within which pay increases will be on an incremental basis provided staff performance reports are satisfactory.

Starting salary will normally be at the minimum of the scale except for existing AFBI staff for whom starting salary may be determined by either promotion or re-grading terms if these are more favourable.

In exceptional circumstances only, consideration may be given to starting at a higher point on the salary scale for applicants with additional relevant experience and/or qualifications. The relevance and extent of the additional experience will be determined by AFBI at the time of offer of 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.

Working Hours

The successful candidate will normally be required to work 5 days each week, totalling 37 hours. On occasions the duties may include some evening and weekend working. AFBI operates a flexi working system.

Location

The successful candidate will normally be based at Veterinary Sciences Division, Stoney Road, Stormont, Belfast, BT4 3SD. They may also be expected to work at other AFBI sites in Northern Ireland as required.

Travel

The post will entail travel locally, nationally and internationally 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.

Training

Appropriate training will be provided, where required, to enable the successful candidate to carry out the full range of assigned duties.

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 to determine if the posting will be made permanent.

Further Information

Further information about the post may be obtained from AFBI by email at: recruitment@afbini.gov.uk or by telephone on 028 90255588.

If you have any queries about the competition process you should contact HRConnect on 0800 1 300 330, or email recruitment@hrconnect.nigov.net

ELIGIBILITY CRITERIA

Applicants **must** demonstrate in their application form that they possess the following criteria, by the closing date:

1. A PhD in a scientific discipline related to host or pathogen genetics or genomics or a closely-related natural science discipline;
2. At least five years' experience of successfully leading and managing a team to deliver a range of pathogen genomics outcomes in a science-based programme;
3. At least two years' experience of establishing and running bioinformatics analysis pipelines;
4. Experience of contributing to the strategic direction of a scientific area including business planning and the allocation of resources to achieve business objectives;
5. Proven ability to secure research funding from government and/or external sources;
6. Be the lead author on at least 5 papers in the area of pathogen or host genomics or a closely-related natural science discipline, which has been published in a peer-reviewed scientific journal*.

* Candidates must provide evidence of eligibility criterion 6 by submitting a fully cited bibliography of all publications. The bibliography should be marked with the relevant competition reference number (IRC258932), competition title and your full name. 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.

In providing evidence for each criteria it will be essential that candidates draw upon specific examples of work they have undertaken to illustrate the extent to which they possess the experience and skills required. It will not be sufficient simply to list the duties and responsibilities of posts held.

Relevant or equivalent 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. You must give the type of qualification and date awarded. 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

In the event that shortlisting is required the selection panel will reach a decision as to whether or not an applicant meets criteria 2 - 6 on a scored basis, with a minimum score set. Only those applicants assessed as meeting all essential criteria will be eligible to proceed to the next stage of the selection process.

However, in the case of a high volume of applicants AFBI may decide to limit the number of applicants it invites for interview in a proportionate manner. In this instance all applicants who meet the essential requirements will be listed in merit order according to their total score and the highest scoring applicants will proceed to interview.

Please note:

- **You should ensure that you provide evidence of your experience in your application form, giving length of experience, examples and dates as required.**
- **It is not sufficient to simply list your duties and responsibilities.**
- **The panel will not make assumptions from the title of the applicant's post or the nature of the organisation as to the skills and experience gained.**
- **If you do not provide sufficient detail, including the appropriate dates needed to meet the eligibility criteria, the selection panel will reject your application.**
- **ONLY the details provided by you in your application form (the employment history and eligibility criteria) will be provided to the selection panel for the purpose of determining your eligibility for the post.**
- **Further information on the Core Competences for this grade can be accessed through www.nicsrecruitment.gov.uk**

PERSON SPECIFICATION

Candidates will be expected to demonstrate the skills and competencies set out in the Essential 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 4 for the purpose of personal and professional development.

Science Leader in Pathogen Genomics - Principal Scientific Officer is analogous to Grade 7 in the NICS.

What is the NICS competency framework?

The competency framework sets out how all NICS employees should work. It puts the Civil Service values of integrity, honesty, objectivity and impartiality at the heart of everything they do, and it aligns to the three high-level leadership behaviours that every civil servant needs to model as appropriate to their role and level of responsibility: Set Direction; Engage People and Deliver Results. Competencies are the skills, knowledge and behaviours that lead to successful performance. The framework outlines ten competencies, which are grouped into three clusters. The competencies are intended to be discrete and cumulative, with each level building on the levels below i.e. a person demonstrating a competency at level 3 should be demonstrating levels 1 and 2 as a matter of course.

The Northern Ireland Civil Service competency framework can be accessed through www.nicsrecruitment.gov.uk

It is important that all candidates familiarise themselves with the competency framework as this forms the basis of the assessment / interview criteria as outlined below.

INTERVIEW CRITERIA

The selection process will include a presentation and a competence-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 **Seeing the Big Picture** and **Leading & Communicating** competencies.

Marks available: 20

1. Professional Knowledge & Skills

Demonstrates an in-depth knowledge and understanding of the application of current scientific approaches to pathogen genomics; Experience of developing, leading and managing a pathogen genomics programme and associated bioinformatics analysis pipelines, including the provision of expert advice to stakeholders, in a science-based organisation; Creating and maintaining positive, professional and trusting working relationships with a wide range of people within and outside the organisation to help achieve business objectives and goals. Can develop professional/specialist/technical knowledge and skills to meet programme/project objectives.

Marks available: 45 Minimum standard: 25

2. Building Capability for All

Effectiveness in this area is having a strong focus on continuous learning for oneself, others and the organisation. For all staff, it is about being open to learning and keeping their knowledge and skill set current and evolving.

Marks available: 10

3. Leading and Communicating

At all levels, effectiveness in this area is about leading from the front and communicating with clarity, conviction and enthusiasm. It is about supporting principles of fairness of opportunity for all and a dedication to a diverse range of citizens.

Marks Available: 20 Minimum standard: 12

4. Making Effective Decisions

Effectiveness in this area is about being objective, using sound judgement, evidence and knowledge to provide accurate, expert and professional advice. For all staff, it means showing clarity of thought, setting priorities, analysing and using evidence to evaluate options before arriving at well-reasoned, justifiable decisions.

Marks available: 15 Minimum standard: 9

5. Collaborating and Partnering

People skilled in this area create and maintain positive, professional and trusting working relationships with a wide range of people within and outside the NICS, to help to achieve business objectives and goals. At all levels, it requires working collaboratively, sharing information and building supportive, responsive relationships with colleagues and stakeholders, whilst having the confidence to challenge assumptions.

Marks available: 15 Minimum standard: 9

Total Marks Available: 125

Overall Pass Mark: 75

COMPETENCE-BASED INTERVIEWS

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

INTERVIEWS

It is intended that interviews for this post will take place in AFBI Newforge, Belfast during week commencing 2nd November 2020.

SELECTION PROCESS

The Merit Principle

Appointments to AFBI are made under the 'merit principle', where the best person for any given post is selected in fair and open competition.

Making your application

The application form is designed to ensure that applicants provide the necessary information to determine how they meet the competition requirements and the eligibility/shortlisting criteria.

Guidance for Applicants

- The space available on the application form is the same for all applicants and must not be altered.
- We will not accept CVs, letters, additional pages or any other supplementary material in place of or in addition to completed application forms.
- Applicants must complete the application form in either typescript font size 12, or legible, block capitals using black ink.
- Applicants must not reformat application forms.
- Information in support of your application will not be accepted after the closing date for receipt of applications.
- HRConnect will not examine applications until after the closing deadline;
- Do not use acronyms, complex technical detail etc. Write for the reader who may not know your employer, your Branch or your job.
- Write down clearly your personal involvement in any experience you quote. Write "I" statements e.g. I planned meetings, I managed a budget, I prepared a presentation. It is how you actually carried out a piece of work that the panel will be interested in.
- The examples you provide should be concise and relevant to the criteria. This is very important as the examples which you provide may be checked out at interview and you may need to be prepared to talk about these in detail if you are invited to interview. It is your *unique* role the panel are interested in, not that of your team or Division.

Application Form Submission

- Please refer to the Candidate Information Booklet before completing an application.
- **All** parts of the application form **must** be completed by the applicant before this application can be considered. Failure to do so may result in disqualification.
- All applications must be received by the advertised closing date. Late applications or applications received by fax or by email will not be accepted. Applicants using Royal Mail should note that 1st class mail does not guarantee next day delivery. It is also the responsibility of the applicant to ensure that sufficient postage has been paid to return the form to HRConnect. HRConnect will not accept any application where they are asked to pay any shortfall in postage.

- Only the employment history, eligibility and shortlisting sections will be made available to the panel.
- Applicants are encouraged to submit online applications wherever possible. However, all requests for hard copy application packs are welcomed and all applications will be treated equally regardless of whether they are hard copy or online.
- When completing the online application, your information is saved as you move through the pages. You may leave the application at any time, providing you have clicked on the 'Save & Continue' button. Once your application has been submitted the option to edit will no longer be available.
- Please note - the session timeout for the online application is 40 minutes, if you do not save or change page within this time you will automatically be logged out and any unsaved work will be lost.
- Please do not attempt to reformat application forms as this will result in disqualification.

Changes in personal circumstances

Please ensure HRConnect are informed immediately of any changes in personal circumstances.

Transgender Requirements

Should you currently be going through a phase of transition in respect of gender and wish this to be taken into consideration in confidence to enable you to attend any part of the assessment process please contact HRConnect. Details of this will only be used for this purpose and do not form any part of the selection process.

Communication between HRConnect and you

HRConnect will issue electronically as many competition communications as possible, you should therefore check your email account to make sure that you don't miss any important communications in relation to this competition. There may, however, still be a necessity to issue some correspondence by hard copy mail.

Further appointments from this competition

Where a further position in AFBI is identified which is considered broadly similar to that outlined in this candidate information booklet, consideration will be given to filling the position from this competition. The merit list resulting from this competition will be valid for a period of up to one year.

Disability Requirements

We will ask on the application form if you require any reasonable adjustments, due to disability, to enable you to attend any part of the assessment process. Details of any disability are only used for this purpose and do not form any part of the selection process. If you have indicated on your application that you have a disability and are successful in the selection process and are being considered for appointment, you may be required to outline any adjustments

you consider necessary in order for you to take up an appointment. If you wish to discuss your disability requirements further, please contact HRConnect.

Equal Opportunity Monitoring Form

Please note, this form is regarded as part of your application and failure to complete and return it will result in disqualification.

For guidance on completing the Monitoring Form and to read the NICS Equal Opportunities Policy Statement to which AFBI adheres please refer to page 29.

All applications for employment are considered strictly on the basis of merit. Applications are particularly welcomed from Roman Catholics and Females as these groups are currently under-represented within AFBI.

AFBI IS AN EQUAL OPPORTUNITIES EMPLOYER

Assessment Information

It is HRConnect policy that all candidates invited to attend for assessment brings sufficient documentation to satisfy the eligibility/shortlisting criteria and the Nationality and Vetting requirements. Further details regarding acceptable documentation will be issued with an invitation to attend for assessment.

You should ensure that these documents are readily available.

Employment Requirements

HRConnect must ensure that you are legally entitled to work in the United Kingdom.

Entry to the United Kingdom is controlled under the Immigration Act 1971. Everyone who does not have the right of abode is subject to immigration control. You should check whether there are any restrictions on your stay or your freedom to take or change employment before you apply for a post. If you are invited to interview we will ask you to provide documentation confirming that you are entitled to work in the UK, under the terms of the Asylum and Immigration Act 1996.

Advice on entitlement to work may be obtained from the Home Office website, www.ind.homeoffice.gov.uk.

Nationality Requirements

There are no nationality requirements for AFBI posts.

Vetting Procedures

1. Baseline Personnel Security Standard

For this post the level of vetting is a Baseline Standard. For this check you will be required to provide the following:

- a) Your passport OR
- b) A document verifying your permanent National Insurance number (e.g. P45, P60 or National Insurance card) AND your birth certificate which includes the names of your parents (long version).
- c) Other acceptable documents are listed on www.ind.homeoffice.gov.uk.
- d) A specimen signature at any assessment event and have this validated against passport, driving licence, application form etc.

We will organise a Criminal Record Check on all applicants to be carried out by AccessNI. The category of AccessNI check required for this post is;

Basic Disclosure Certificate

You should not put off applying for a post because you have a conviction. We deal with all criminal record information in a confidential manner, and information relating to convictions is destroyed after a decision is made.

PLEASE NOTE: It is a criminal offence for anyone who is included on a barred list to work or seek work, in regulated activity.

For more information, the address of the AccessNI website is: <http://www.accessni.gov.uk/>. Those applicants who are being considered for appointment will be contacted by HRConnect, normally after interview/test, and will be asked to complete the AccessNI application form. This can be downloaded from the AccessNI website. Guidance notes of the completion of the form are also included on the website. Please note that a request to complete this form should not be seen as a guarantee of an offer of appointment. Failure to complete the above form and return it within the specified time will be regarded as 'no longer interested in the position' and your application will be withdrawn.

Criminal Record information is subject to the provisions of the Rehabilitation of Offenders (NI) Order 1978.

Order of Merit

The selection panel will assess candidates against the interview criteria. Those candidates who meet the required standard(s) and pass mark will be deemed suitable for appointment. The selection panel will then list those suitable for appointment in order of merit with the highest scoring applicant ranked first. HRConnect will allocate a candidate (or candidates) to a vacancy (or vacancies) in the order listed. The order of merit is valid for one year.

GENERAL INFORMATION

Pensions

New entrants who join the Agri-Food and Biosciences Institute (AFBI) are eligible to join the NICS pension scheme.

Further details can be found on the Principal Civil Service Pensions Scheme (Northern Ireland) website at:

www.finance-ni.gov.uk/civilservicepensions-ni

or

if you are unable to access the website please contact Civil Service Pensions as follows:

Civil Service Pensions
Waterside House
75 Duke Street
Londonderry
BT47 6FP
Tel: 02871 319000
Email: cspensions.cpg@dfpni.gov.uk

Feedback

AFBI is committed to ensuring that the processes used to recruit and select staff are fair. We are consequently committed to providing feedback in respect of decisions taken in determining eligibility/shortlisting as well as at interview. Feedback in respect of eligibility/shortlisting will be communicated automatically to those candidates who fail to satisfy any criteria. All requests for feedback are welcome.

THIS INFORMATION PACK DOES NOT FORM PART OF
CONDITIONS OF EMPLOYMENT

Please apply online or post your hardcopy completed application form to the HRConnect Recruitment Team:

HRConnect
PO Box 1089
2nd Floor
The Metro Building
6-9 Donegall Square South
Belfast
BT1 9EW

NOTE: Late applications or applications received by fax or email will not be accepted.

Contact details:

If you have any queries regarding the competition process please contact HRConnect at the address above or by;

Email: Recruitment@HRConnect.nigov.net
Tel: 0800 1 300 330
Fax: 028 9024 1665

Equality, Diversity and Inclusion

Policy Statement

The Northern Ireland Civil Service Equality, Diversity and Inclusion Policy statement to which AFBI adheres is set out below.

“The Northern Ireland Civil Service (NICS) has a strong and clear commitment to equality, diversity and inclusion. It is our policy that all eligible persons shall have equal opportunity for employment and advancement in the NICS on the basis of their ability, qualifications and aptitude for the work. Everyone has a right to equality of opportunity and to a good and harmonious working environment and atmosphere where they are treated with dignity and respect. We aim to provide opportunities for all sections of the community and continue to strive to create an inclusive working environment in which difference is recognised and valued. Bringing together people from diverse backgrounds and giving each person the opportunity to contribute their skills and experience will help us to respond more effectively to the needs of the people we serve”.

We all want to work in an harmonious workplace where we feel valued, respected and included, irrespective of gender, including gender reassignment, marital or civil partnership status, race/ethnic origin, religious belief or political opinion, disability, having or not having dependants, sexual orientation and age.

In order to provide a high quality service to the people of Northern Ireland the NICS needs to attract, recruit, develop and retain the very best people at all levels. Our approach is based on three key principles:-

Equality – we promote equality of opportunity by seeking to remove barriers, eliminating discrimination and ensuring equal opportunity and access for all groups of people.

Diversity – we accept each person as an individual. Our success is built on our ability to embrace diversity – and we believe that everyone should feel valued for their contributions. By working together we will deliver the best possible service for our staff, customers and stakeholders.

Inclusion – we create a working culture where differences are not merely accepted, but valued; where everyone has the opportunity to develop in a way that is consistent with, and adheres to NICS values of impartiality, honesty, integrity and objectivity. Our aim is to be an organisation where people feel involved, respected and connected to our success.

It is the responsibility of all staff to be aware of and to apply this policy. Both Management and Trade Union Side are fully committed to the policy and will endeavour to ensure its full implementation.

Equal Opportunities Monitoring

Equality monitoring is the process of collecting, storing and analysing information that is relevant to and necessary for the purpose of promoting equality of opportunity between different categories of persons. This section sets out what information is collected, the reasons for doing so and what it is used for.

You should note that the Monitoring Form is regarded as part of your application and failure to fully complete and return it will result in disqualification. The Monitoring Form will be processed separately and neither the form nor the details contained in it will be available to those considering your application.

Monitoring equality and diversity in the workforce enables the NICS to examine how our employment policies and processes are working and to identify areas where these appear to be impacting disproportionately on certain groups of staff.

Legislative Context

This section explains the reasons for gathering this information by setting out the legislative background.

Gender

The Sex Discrimination (NI) Order 1976 (as amended) makes it unlawful to discriminate against an individual on the grounds of his or her sex. Information on gender is also provided in the annual statutory monitoring the, as required by the Fair Employment and Treatment (NI) Order 1998. Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between men and women generally.

Age

The Employment Equality (Age) Regulations (NI) 2006 make it unlawful for employers and others to discriminate on grounds of age. Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons of different ages and age groups.

Community Background

The Fair Employment and Treatment (NI) Order 1998 outlaws discrimination on the basis of religious belief or political opinion. The Order also requires the NICS to submit an annual monitoring return to the Equality Commission for Northern Ireland. This takes the form of a statistical return, providing information on the gender and community background composition of all people working in the NICS at the 1st January each year.

Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons of different religious belief and political opinion. Following guidance issued in July 2007 by the Equality Commission for NI the NICS has decided to use “community background” information as a proxy for political opinion.

Disability

The Disability Discrimination Act 1995 (the DDA) provides protection for disabled persons against discrimination on the grounds of disability.

The DDA defines disability as a “physical or mental impairment, which has a substantial and long term adverse effect on a person’s ability to carry out normal day-to-day activities.”

This definition is interpreted as follows:-

Physical Impairment: this includes, for instance, a weakening of part of the body (eyes, ears, limbs, internal organs etc) caused through illness by accident or from birth. Examples would be blindness, deafness, paralysis of a leg or heart disease.

Mental Impairment: this includes mental ill health and what is commonly known as learning disability, and social functioning.

Substantial: put simply, this means the effect of the physical or mental impairment on ability to carry out normal day to day activities is more than minor or trivial. It does not have to be a severe effect.

Long-term adverse effect: the effect has to have lasted or be likely to last overall for at least 12 months and the effect must be a detrimental one. A person with a life expectancy of less than 12 months is of course covered if the effect is likely to last for the whole of that time.

A normal day to day activity: this is something which is carried out by most people on a fairly regular and frequent basis such as washing, eating, catching a bus or turning on a television. It does not mean something so individual as playing a musical instrument to a professional standard or doing everything involved in a particular job.

What sort of effect must there be?

The person must be affected in at least one of the respects listed in the DDA: mobility; manual dexterity; physical co-ordination; continence; ability to lift, carry or otherwise move everyday objects; speech; hearing or eyesight; memory or ability to concentrate, learn or understand; ability to take part in normal social interaction and form social relationships; or perception of risk of physical danger.

What happens if the effects are reduced by medication or other treatment?

Broadly speaking, the effects that matter are those that would be present if there was no medication or treatment taking place. The exception is people who wear spectacles or contact lenses when what matters is the effect that remain while the spectacles or contact lenses are being used.

Are there any types of condition covered by special provisions in the DDA?

Yes, because some people with particular conditions might not otherwise be counted as disabled. These are provisions covering:

Recurring or fluctuating conditions such as arthritis, where the effects can sometimes be less than substantial, which are treated as continuing to have a substantial adverse effect so long as that effect is likely to recur;

Conditions which progressively deteriorate, such as motor neuron disease, which count as having a substantial effect from the first time they have any effect at all on ability to carry out normal day to day activities even if it is not substantial, so long as there is eventually likely to be a substantial adverse effect; and

People with cancer, HIV, or multiple sclerosis are deemed to be disabled people from the point of diagnosis, regardless of whether or not they have any symptoms.

Are any conditions not covered?

Yes, the following conditions specifically do not count as impairments:

Addiction to or dependency on alcohol, nicotine or any other substance (unless resulting from the substance being medically prescribed);

Seasonal allergic rhinitis (e.g. hay fever) unless it aggravates the effect of another condition;

Tendency to set fires, or steal, or physically or sexually abuse other persons;

Exhibitionism and voyeurism;

Severe disfigurements consisting of tattoos, non-medical body piercing or attachments to such piercing are not treated as having substantial adverse effects.

What if someone has recovered from a disability?

Much of the DDA also applies to people who have had a disability in the past (for example, someone who was disabled by mental ill health) but have now fully recovered. People who were registered disabled under the Disabled Persons (Employment) Act (NI) 1945 both on 12 January 1995 and 2 December 1996 will be regarded as having had a disability in the past if they do not in any case fall within the definition of the DDA.

Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons with a disability and persons without.

Race

The Race Relations (NI) Order 1997 makes it unlawful to discriminate on grounds of colour, race, nationality or ethnic or national origin. Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons of different racial group(s).

Sexual Orientation

The Employment Equality (Sexual Orientation) Regulations (NI) Order 2003 makes it unlawful for employers and others to discriminate on the grounds of sexual orientation. In order to monitor the effectiveness of NICS policies information is gathered on sexual orientation. Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons of different sexual orientation.

Marital Status

The Sex Discrimination (NI) Order 1976 (as amended), makes it unlawful to discriminate against married persons and civil partners in employment. Section 75 of the Northern Ireland Act 1998 requires public authorities in carrying out their functions in NI to have due regard to the need to promote equality of opportunity between persons of different marital status.

Dependants Status

Section 75 of the Northern Ireland Act 1998 requires public authorities, in carrying out their functions in NI, to have due regard to the need to promote equality of opportunity between persons with dependants and persons without.

Confidentiality of Monitoring Information

The following general principles will be applied to all individual monitoring information:-

- individual monitoring information will be afforded a high degree of confidentiality;
- misuse of monitoring information will be viewed as a disciplinary offence; and
- individual monitoring information will only be disclosed to members of staff or officials of a trade union, members of which are employed in the NICS, if it is necessary to do so for the appropriate discharge of their duties and responsibilities.

In addition to the above internal safeguards on the protection of equality monitoring information generally, the confidentiality of community background monitoring information is protected through Regulations made under the Fair Employment and Treatment (Northern Ireland) Order 1998 (FETO). These make it a criminal offence, subject to specific exceptions, for an employer or employee to disclose information on the community background of an individual which has been obtained, or is used, for the purpose of monitoring under FETO.

As with other forms of personal data, the obtaining, use, storage and disclosure of monitoring information is covered by the Data Protection Act 1998 (DPA). Monitoring information is held on computer and is protected by a high level of security. Access to this data is restricted to those NICS staff, employees of HRConnect and Trade Union officials whose duties make it necessary for them to have it. Misuse of monitoring information is viewed as a disciplinary offence.