



Agri-Food and Biosciences Institute
Annual Report and Accounts
For the year ended 31 March 2015

Laid before the Northern Ireland Assembly
Under the Agriculture (Northern Ireland) Order 2004
By the Department of Agriculture and Rural Development
on the 21st of December 2015

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FOREWORD FROM THE CHAIR



I am delighted to introduce the Annual Report and Statement of Accounts for the Agri-Food and Biosciences Institute (AFBI) for the 2014/15 financial year.

The Institute delivered the 2014/15 Assigned Work for the Department of Agriculture and Rural Development (DARD) to required quality standards in an environment of reduced core funding, while also absorbing significant inflationary pressures. AFBI has delivered a large volume of commercial work for a wide range of customers during the year and, in challenging economic circumstances, has maintained commercial income at a level similar to last year. This income has been extremely valuable in maintaining the scientific skills and expertise necessary to deliver a world class service to the local industry, government and indeed our many international customers.

**“IT IS MY INTENTION TO DEVELOP
EVEN CLOSER LINKS WITH
INDUSTRY IN THE COMING YEARS.”**

In my introduction to last year’s Annual Report, I indicated that engagement with a wide range of stakeholders in the local agri-food sector would be a priority for me as Chair of AFBI. I have continued that engagement in 2014/15 and also continued to meet staff of the Institute on a frequent basis. The views expressed by stakeholders, heard at various events and during presentations to the AFBI Board, have been very valuable to AFBI as it charts its strategic course for the next five years. It is my intention to develop even closer links with industry in the coming years.

During the year AFBI worked closely with DARD to develop the Institute’s 2020 Strategy. This work was carried out against a backdrop of rapidly developing severe pressures on public finances in Northern Ireland. The AFBI Board and Executive are clear that AFBI

must consolidate around its key areas of scientific strength where it can deliver world class science, reduce its cost base and drive commercial income to the maximum extent possible.

“I AM CONFIDENT THAT THE QUALITY OF AFBI’S STAFF WILL ALLOW THE INSTITUTE TO CONTINUE TO DEVELOP AS A WORLD LEADING SCIENTIFIC INSTITUTE.”

The severe pressures on public finances, which are likely to remain for the foreseeable future, mean it is imperative that AFBI and DARD, its Sponsor Department, work ever more closely together to ensure that the most appropriate structures are in place to fully exploit the major potential of AFBI to leverage in additional research funding to maximise the value of DARD’s core grant-in-aid to the Institute. I and my colleagues on the AFBI Board will continue to work closely with the Executive team and DARD to ensure that vital statutory, diagnostic/surveillance and Research & Development (R&D) work programmes continue to be delivered while preserving the essential scientific capacity of AFBI to deliver effective rapid, local emergency responses when required.

I would like to take this opportunity to thank Mrs Hilda Stewart, who retired from the board on 31 March 2015, for her dedication and support during her term in office. I am pleased to welcome Mrs Maureen McKeague, Mr Colin Coffey and Mr Ian Buchanan who joined the Board on 1 April 2015.

While it is clear that the overall budgetary environment will remain extremely challenging for the foreseeable future, I am confident that the quality of AFBI’s staff will allow the Institute to continue to develop as a world leading scientific institute, supporting the local agri-food sector as it implements the ambitious targets of the *Going for Growth* strategy.



Mr Colm McKenna
Chair of AFBI Board

Date: 30th November 2015

CHIEF EXECUTIVE'S REVIEW



I am pleased to present the Annual Report and Statement of Accounts for the Agri-Food and Biosciences Institute (AFBI) for the 2014/15 financial year.

During the year, AFBI followed the development of its first Science Strategy in 2013/14 with its first independent peer review of science quality. This, the first year of a three-year rolling review programme, focussed on the AFBI Sustainable Livestock Systems Research Programme. I am grateful to Dr Frank O'Mara (Chair), Mr Tony O'Neill and Mr Wesley Aston, agri-food industry representatives, and Professor Helen Millar, Dr Carolyn Rymer, Professor Nigel Scollan and Professor Bob Bansack, academic experts, for carrying out the review in such a highly professional and diligent manner. The Review Panel made several valuable recommendations on the quality of research and on the method of commissioning of AFBI research by DARD. AFBI has developed an action plan to implement the recommendations on improving particular areas of the research carried out by the Institute.

During the year, AFBI continued to deliver a wide range of statutory, surveillance, analytical, emergency response and R&D work in the areas of animal health and welfare, plant health, crop and animal production, food innovation and safety, the environment, marine and freshwater fisheries, and rural and agri-food economics while implementing efficiency measures. Customers included Department of Agriculture and Rural Development, our sponsor department, other government departments and agencies and a wide range of local, national and international organisations.

The Institute's resource grant-in-aid from DARD was reduced from £37.646m in 2013/14 to £36.468m in 2014/15. In response AFBI introduced a series of cost reduction measures including suppression of posts, redeployment of staff to priority work areas, and cuts in overtime, travel and subsistence and the use of agency staff.

“IT IS CLEAR THAT, AS CORE GOVERNMENT FUNDING OF AFBI CONTINUES TO DECREASE, COMMERCIAL INCOME WILL ASSUME EVEN GREATER IMPORTANCE FOR MAINTENANCE OF SCIENTIFIC CAPACITY WITHIN THE INSTITUTE.”

Due to the announcement during the year of further major reductions in grant-in-aid for 2015-16 and beyond, AFBI developed plans for a substantial staff Voluntary Exit Scheme to take effect in 2015/16 targeting 200 leavers. This will have major implications for the scientific capacity of AFBI from late 2015 onwards.

It is clear that, as core government funding of AFBI continues to decrease, commercial income will assume even greater importance for maintenance of scientific capacity within the Institute. Income from other sources has been maintained, albeit at a slightly lower level, in a very competitive external funding environment (£17.982m in 2014/15 compared to £18.598m in 2013/14) and represented approximately 32% of total revenue during the year. In addition to adding value to public sector investment in the Institute, this income significantly enhances AFBI’s scientific skills and capacity to deliver its broad range of scientific work, including emergency response.

The high international standard of scientific work carried out in AFBI is evidenced by frequent invitations to staff members to speak at international conferences, join European R&D consortia, participate in EU inspection missions to various countries and undertake contract work for organisations in several countries. This engagement is valuable when bidding to join international research consortia applying for research funding. In line with the Northern Ireland Executive’s target of increasing the value of competitive EU funding drawn down by Northern Ireland organisations, I am pleased that AFBI scientists made several bids to the first round of calls under the European Commission’s Horizon 2020 programme. This work was assisted by the DARD-funded Horizon 2020 Northern Ireland Contact Person for agri-food who is based in AFBI. The Institute’s scientists have plans in place for a significant number of bids to future Horizon 2020 calls as they are announced.



Dr Yunwei Zhang (Chinese Agricultural University), Dr Trevor Gilliland, Dr Tianhai Yan (both AFBI) Prof Fuyu Yang (CAU) discuss grass production at AFBI Crossnacreevy



Agriculture Minister, Michelle O'Neill addressing the AFBI-LMC Beef Conference in November 2014



Dr Robert Rosell talks to Daryl Grimason of BBC NI about the return of salmon to the River Lagan for their *Riverlands* programme



An invasive species, the "Bloody red shrimp" (*Hemimysis anomala*) was discovered for the first time in Northern Ireland during an AFBI survey of Lough Erne

"A CENTRAL PILLAR OF AFBI'S STRATEGY IS THEREFORE TO FOCUS ON THE KEY SCIENTIFIC PILLARS IN WHICH AFBI CAN DELIVER WORLD CLASS SCIENCE TO THE LOCAL INDUSTRY."

AFBI has also been a partner with several research institutes in Great Britain in two applications for funding under the UK Agricultural Technologies Strategy. At the time of writing, I am hopeful of substantial success in those bids. Our recent business development work in North America has also resulted in several promising collaborative opportunities and the Institute is continuing to engage with research organisations in China. These links not only have the potential for significant research collaboration but also help build relationships to assist the development of agri-food trade links.

During the year AFBI worked closely with DARD to develop the Institute's 2020 Strategy and prioritise the work AFBI carries out for DARD. The main objective of the strategy is to allow AFBI to achieve its vision of providing world class science to all its government and private sector customers while operating within the constraints of the current and future anticipated pressures on public finances. The Board and Executive Management Team (EMT) of AFBI acknowledge that a major reduction in the staffing, estate and overhead costs of AFBI is essential if the Institute is to be sustainable in this unprecedented financial environment. However, they are determined that AFBI will grow from its areas of strength in line with an ambitious science strategy that allows the Institute to provide world class science in key areas of expertise. A central pillar of AFBI's strategy is therefore to focus on the key scientific pillars in which AFBI can deliver world class science to the local industry.

Following the 2013 Northern Ireland Audit Office (NIAO) Value for Money Review of AFBI and the subsequent Public Accounts Committee (PAC) hearing, the Institute devoted considerable effort during the year to implementing the NIAO and PAC recommendations. At the time of writing these are on track to be fully implemented by end of December 2015.



Prof Graham Plastow of the University of Alberta, Canada, presenting to the AFBI-LMC Beef Conference



Lucy McMahon and Jade Steel (Bloomfield Collegiate, Belfast), at the AFBI display at the Sentinus event for students wishing to pursue a career in STEM subjects

It is recognised by DARD, AFBI, PAC and NIAO that the operating costs of the estate allocated to AFBI on its formation are too high. Considerable work was done by DARD and AFBI during the year to develop outline business cases for replacement of the Veterinary Sciences Division Main Building and development of new Headquarters/Grassland and Plant Science Centre facilities. I am pleased to report that this work has resulted in submission by DARD of outline business cases to the Department of Finance and Personnel in July 2015. The DARD Minister has indicated her support for subsequent bids for the necessary capital funding. Considerable work also took place in preparing a plan for necessary development of the farm research accommodation at AFBI Hillsborough, taking account of opportunities to collaborate more closely with DARD's College of Agriculture Food and Rural Enterprise (CAFRE).

Organisational change continued during the year with the merger of the renewable energy unit in Agriculture Branch at Hillsborough with the biomass unit in Crops Grassland and Ecology Branch at Loughgall to create a single management unit for research on biomass production and combustion as well as the use of renewable energy crops for bioremediation purposes. Preparation for amalgamation of the Immunodiagnostic Branch and Chemical Surveillance Branch at AFBI Stormont (effective from 1 April 2015) also took place in response to a reduced volume of statutory brucellosis and veterinary drug residue testing. In addition it was decided during 2014-15 to transfer Food Science Branch's food microbiology and food chemistry work, currently carried out at AFBI Newforge, to the Bacteriology Branch and Chemical Surveillance Branch at AFBI Stormont where similar work is conducted. The DARD Minister has recently agreed to the principle of relocating the remainder of Food Science Branch's food innovation work to CAFRE's Loughry campus to form a "one-stop-shop" for food technology and food science for the local industry.

Having recently announced my intention to retire in early 2016, I would like to thank all AFBI's staff members for their support during my tenure as Chief Executive. It has been a privilege to have led the Executive of AFBI for what, by the time of my retirement, will have been over 6 years in the role of CEO. I have no doubt that with the high calibre of staff in AFBI and the strong determination of the Board and Executive Management Team, the Institute will continue to develop as an internationally renowned scientific organisation providing the highest quality of service to all our customers.



Professor Seamus Kennedy
MVB PhD MRCVS FRCPath
Chief Executive Officer

Date: 30th November 2015



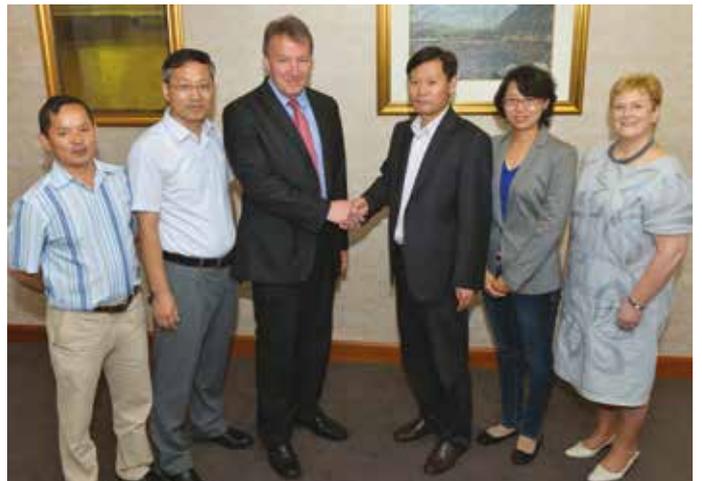
AFBI Loughgall hosted an international research team of partners from Germany, France, Italy, Ireland and the U.K. The research team were looking at innovative strategies for using agricultural land for wood fuel production.



Dr Trevor Gilliland (Centre) Phd supervisor for Dr Vincent Griffith (left) and Dr Daniel Enriquez Hidalgo (right), pictured at their graduation at Queen's University, Belfast.



Environment Minister Mark H Durkan visiting marine research vessel *Corystes* to discuss the scientific services that AFBI provides for his department under a Service Level Agreement



Prof Seamus Kennedy greets Assistant Dean Prof Fuyu Yang of the China Agricultural University's (CAU) College of Animal Science and Technology to discuss area of research cooperation, exchange of staff and post-grad students

DIRECTORS' REPORT



Introduction

The Agri-Food & Biosciences Institute presents its annual report and accounts for the financial year ended 31 March 2015. The Institute was formed on 1 April 2006 with the amalgamation of the Department of Agriculture and Rural Development (DARD) Science Service and the Agricultural Research Institute of Northern Ireland, which was a separate Non-Departmental Public Body (NDPB) funded by DARD. AFBI is established under the Agriculture (Northern Ireland) Order, 2004, as a DARD NDPB.

The accounts have been prepared under the Accounts Direction given by the Department of Agriculture and Rural Development, with the approval of the Department of Finance & Personnel and in accordance with the Agriculture (Northern Ireland) Order 2004.

AFBI Board

AFBI is managed by a Non-Executive Board which has responsibility for providing strategic leadership for the organisation, ensuring that it fulfils the delivery objectives set by the Department of Agriculture and Rural Development (DARD) and for promoting the efficient and effective use of staff and other resources by AFBI.

The main purpose of the Board is to ensure that AFBI is successful in delivering the policies and priorities of DARD (and the Minister) by providing strategic leadership to AFBI and ensuring effective performance management of AFBI.

To this end and in pursuit of its wider corporate responsibilities, the responsibilities of the Board as set out in the Board Operating Framework are to:

- establish the overall strategic direction of AFBI within the policy and resources framework determined by the Minister and DARD;
- constructively challenge AFBI's Executive Management Team in its planning, target setting and delivery of performance;
- ensure that the Board receives, reviews and acts upon regular financial information concerning the management of AFBI; is informed in a timely manner about any concerns relating to the activities of AFBI; and provides positive assurance to DARD that appropriate action has been taken on such concerns;
- ensure that DARD is kept informed of any changes which are likely to impact on the strategic direction of AFBI or on the attainability of its targets, and in conjunction with AFBI's Executive Management Team and DARD, determine the steps needed to deal with such changes;

- ensure that all statutory or administrative requirements for the use of public funds are complied with; that the Board operates within the limits of its statutory authority and any delegated authority agreed with DARD, and in accordance with all other conditions relating to the use of public funds; and that, in reaching decisions, the Board takes into account all relevant guidance issued by DFP and DARD;
- ensure high standards of corporate governance at all times, and use the audit committee to provide the Board with assurance in relation to the management of key financial and other risks facing the organisation; and
- appoint a Chief Executive to AFBI and, in consultation with DARD, set performance objectives and remuneration terms linked to those objectives for the Chief Executive, which gives due weight to the proper management and use of public monies.

Role of the Chairperson of AFBI

The Chairperson is personally responsible and accountable to the Minister for the performance of AFBI and for the strategic leadership and control of the Board. He or she is responsible for ensuring that AFBI's policies and actions support the Minister's (and DARD's) wider strategic policies and that its affairs are conducted with probity. The Chairperson shares with other AFBI Board members the corporate responsibilities set out in the Management Statement and Financial Memorandum (MSFM), and in particular for ensuring that AFBI fulfils the aims and objectives set by DARD and approved by the Minister. The Chairperson also sets performance measures for the board and individual board members.

Board Members

Members are appointed in accordance with the Office of the Commissioner for Public Appointments (OCPA) NI Code of Practice. The terms of appointment of members are for either three or four year periods, with the Chair appointed for three years. The Chair receives an annual remuneration of £25,730 and is expected to commit approximately 40 days per annum to the post. The Deputy Chair receives £10,725 and has a commitment in the region of 20 days per annum. Members are expected to commit in the region of 15 days per year and receive £3,865. Further remuneration was received by Board Members at a *per diem* rate for attendance at relevant committee meetings.



Mr C McKenna

Prof W McKelvey

Mrs H McCartan

Mr B McCann

Mrs H Stewart

Chairperson Mr Colm McKenna enjoyed a long and successful career in Financial Services with Bank of Ireland Group, taking early retirement in October 2008. His final position was Head of Marketing Services, UK, but he previously held the positions of Head of Group Marketing, NI, and Head of Treasury and International Banking.

Mr McKenna was previously Deputy Chair of Investment Belfast (Belfast City Council) and Chair of the NI Euro Preparations Forum (DETI). He is a Business Administration Graduate from Manchester Business School.

Mr McKenna is Chairman of the South Eastern Health and Social Care Trust, Chairman of Northern Ireland Confederation for Health and Social Care (NICON), Chairman of BBC NI Appeals Advisory Committee, Chairman of the NI Assembly Secretariat Audit and Risk Committee, a Non-Executive Director and Chair of the Audit Committee at ILEX Urban Regeneration, a Non-Executive Director of the Northern Ireland Courts and Tribunals Service, Chairman of Club Aontroma, a registered charity responsible for fundraising to assist Antrim GAA.

Colm lives in Glenavy, Co. Antrim with his wife Giuseppa and they have two grown up children and four grand- daughters.

Deputy Chairperson Professor Bill McKelvey is an Ulsterman, born and raised on a dairy farm in County Down, who has spent most of his professional career to date working in Scotland. He currently lives near Peebles in the Scottish Borders. He was Chief Executive and Principal of the Scottish Agricultural College for ten years until early 2012.

He is a Non-Executive Director of Scotland's largest farming business, Glenrath Farms. He holds two other Ministerial appointments: he is a member of the Board of the Scottish Environmental Protection Agency, and a member of the Scottish Food Advisory Committee.

He holds a first class honours degree in veterinary science from the University of Glasgow, a postgraduate diploma from the University of Guelph, Canada, and a PhD from the University of Aberdeen. He is a Fellow of the Royal Agricultural Societies, serves as Chair of the Veterinary Policy Group of the British Veterinary Association and is a member of the Advisory Committee for Rural Development of Scottish Land and Estates.

In May 2011, he was elected as a Fellow of the Royal Society of Edinburgh, in recognition of his contribution to science, and was awarded an OBE in the Queen's Birthday Honours (June 2011), for services to agriculture. In June 2012 he was awarded an Honorary Doctor of Science Degree from the University of Edinburgh.

Mrs Hilary McCartan is a Chartered Accountant by profession and lives in Belfast. Mrs McCartan has over 20 years post qualifying experience in executive and non-executive roles in the private and public sectors.

Mrs McCartan has two other public appointments. She is a Commissioner on the Northern Ireland Legal Services Commission and a Non-Executive Director of the Business Services Organisation (DHSSPS).



Prof P Murphy

Dr C McMurray

Mrs S Havlin

Mr D Lindsay

Mr K Millar

Mr Bob McCann lives in Newtownabbey. He is a Chartered Certified Accountant and has a broad management background having held a number of senior management posts in both the private and public sectors, including Group Financial Controller and General Manager (Finance) in NIE, and Director of Finance in the IT company Sx3. He is currently a Non-Executive Director in the Northern Health and Social Care Trust and Warrenpoint Harbour Authority, Independent Member of the NI Housing Executive Audit Committee, member of the Solicitors Disciplinary Tribunal, and a member of the NI Valuation Tribunal.

Mrs Hilda Stewart lives in Randalstown and is actively involved in the family farm partnership. She has an MSc in Sustainable Rural Development from Queen's University Belfast. Mrs Stewart is currently Chair of the CAFRE College Advisory Group (CAG). She has previously held a number of public appointments and voluntary positions including World President of the Associated Countrywomen of the World and Chairman of the Federation of Women Institutes of Northern Ireland. Mrs Stewart who is a Fellow of the Royal Agricultural Societies was awarded the MBE in 1996 and the OBE in 2007 for services to rural women and agriculture. Mrs Stewart completed her Term of Office on 31 March 2015.

Professor Patrick Murphy is a native of Rostrevor, Co Down, where he still lives. In a career spanning more than 40 years in education, he has worked at every level of learning from nursery to university, in teaching, management or governance. He was Director and Chief Executive of Belfast Institute of Further and Higher Education for seven years, during which time he helped to transform the profile, content and quality of further and higher education. A specialist in public policy-making,

he has served in recent years on a number of public bodies in a wide variety of areas including education, health, heritage, agri-food and local government. He is currently Chair of the Northern Ireland Medical Research Ethics Committee (RECB) in the Department of Health, Social Services and Public Safety and he continues to work as a consultant in social and economic policy.

Dr Cecil McMurray lives in Helens Bay, Co. Down. Dr McMurray has held a number of senior positions with Department of Agriculture Northern Ireland (DANI) and DARD and Queens University Belfast. He is an independent consultant, operating through Sci-Tec Consultancy, who has worked for the World Bank, the European Commission and Ministries of Agriculture in several countries world-wide. Dr McMurray is currently chairing the Department for Environment, Food and Rural Affairs' (DEFRA) Diagnostics Advisory Group on Bovine Tuberculosis. Dr McMurray holds no other Ministerial Public appointments. He was awarded a CBE for Public Service in 2002.

Mrs Sarah Havlin is the Certification Officer of Northern Ireland; a quasi-judicial and regulatory public office in the field of Trade Union Law. A solicitor by profession, she has a background in agricultural law, including the Chairmanship of the Independent Agricultural Appeals Panel for Farming Grants and Subsidies and Animal Valuation, and she currently serves as the Chair of the Agricultural Wages Board. She is a visiting tutor at the Institute of Professional Legal Studies at Queen's University and an Associate Lecturer in Law with the Open University. Mrs Havlin also holds a Ministerial public appointment in the Exceptional Circumstances Tribunal and the Regulation and Quality Improvement Authority.

Mr David Lindsay lives in Killinchy, Co Down. Mr Lindsay has a First Class Honours degree in Food Technology. He is a fully chartered member of the Chartered Quality Institute and has a certificate of competence in project sponsorship that is awarded by the National School of Government and College of Estate Management to the Office of Government Commerce (OGC) approved syllabus. Mr Lindsay is the Project Sponsor for the Northern Ireland Fishery Harbour Authority (NIFHA), and also holds a Ministerial public appointment with The Northern Ireland Food Advisory Committee.

Mr Ken Millar lives in Comber, Co Down. Mr Millar was CEO and Accounting Officer of a Department of Finance & Personnel's Next Steps Agency between 1996 and 2002. He was also CEO and interim Accounting Officer for a short period for the Northern Ireland Law Commission. Mr Millar was involved in preparatory work in relation to the formation of AFBI and in its organisational development between 2006 and 2010. Mr Millar also holds a Ministerial public appointment with the Northern Ireland Housing Executive Board.

Board Sub-Committees

There are four sub-committees of the Board.

Organisational Development and Human Resources Sub-Committee

The primary role of this Committee is the overview of Organisational Development and Human Resources within AFBI and to support the Board's programme of Change Management.

Organisational Development and Human Resources Sub-Committee	
Non-Executive Chair	Professor Bill McKelvey
Non-Executive Director	Professor Patrick Murphy
Non-Executive Director	Mr Ken Millar

Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee advises the Board and Accounting Officer on issues of risk, internal control, governance and any material items affecting the accounts.

Audit and Risk Assurance Committee	
Non-Executive Chair	Mr Bob McCann
Non-Executive Director	Professor Patrick Murphy
Non-Executive Director	Mrs Sarah Havlin

Other Attendees include:

Head of Internal Audit
 DARD Internal Audit
 Northern Ireland Audit Office
 AFBI Sponsor Branch
 Chief Executive Officer, AFBI
 Director of Finance and Corporate Affairs, AFBI
 Head of Finance Branch, AFBI
 Head of Governance & Performance, AFBI

Science Strategy Committee

The role of the Science Strategy Committee is to assist the Executive in developing a Science Strategy for AFBI. In particular, to:

- Identify and prioritise areas of existing scientific work which are of strategic importance to AFBI; and
- Identify and prioritise areas of existing scientific work which are of lower strategic importance to AFBI and which could therefore be reduced or ceased in order to transfer resources to work of higher priority.

Science Strategy Committee	
Non-Executive Chair	Mr David Lindsay
Non-Executive Director	Dr Cecil McMurray

Finance Sub-Committee

The role of the AFBI Board Finance Sub-Committee is to support the Board in its responsibilities for the oversight of financial management including, in particular, the review of financial plans and budgets as well as financial monitoring.

Finance Sub-Committee	
Non-Executive Chair	Mrs Hilary McCartan
Non-Executive Director	Mrs Hilda Stewart
Non-Executive Director	Mr Ken Millar

Executive Management Team

The Executive Management Team (EMT) of the Institute was made up as follows:

Chief Executive Officer

Professor Seamus Kennedy

Director of Sustainable Agri- Food Science Division

Dr Sinclair Mayne

Director of Veterinary Science Division

Dr Stanley McDowell

Director of Finance and Corporate Affairs Division

Mrs Lesley Hogg

EMT generally meets twice monthly for EMT Finance and EMT General meetings. These have standing agenda covering finance, resources, operational management, health and safety and business development. The minutes of these monthly meetings are available on AFBI's intranet.

Details of significant interests held by EMT members

EMT Members do not hold any other directorships or any other significant interests which may conflict with their management responsibilities.

Role of the Accounting Officer

AFBI's Chief Executive is designated Accounting Officer for the NDPB by the Departmental Accounting Officer and as such is accountable to the Northern Ireland Assembly for AFBI's use of resources as set out in the Management Statement/ Financial Memorandum (MSFM).

In particular, the Accounting Officer shall ensure that:

- AFBI's strategic aims and objectives support DARD's wider strategic aims and current Public Service Agreement (PSA) objectives and targets;
- the financial and other management controls applied by DARD to AFBI are appropriate and sufficient to safeguard public funds and for ensuring that AFBI's compliance with those controls is effectively monitored ('public funds' include not only any funds granted to AFBI by the Assembly but also any other funds falling within the stewardship of AFBI);
- the internal controls applied by AFBI conform to the requirements of regularity, propriety and good financial management; and
- any grant-in-aid to AFBI is within the ambit and the amount of the Request for Resources and that NI Assembly authority has been sought and given.

Staff Related Information

Provision of information to and consultation with employees

The Institute ensures that all staff are kept informed of plans and developments through meetings, monthly team briefs, staff newsletters and the publication of business and training plans. Staff have access to welfare services and trade union membership. AFBI use the established Whitley process of staff consultation. The Whitley Council

and Committees provide an agreed forum for discussion and they are attended by employer and employee (trade union) representatives.

Career Development

AFBI continues to promote opportunities for career development internally and during the course of this year a total of 31 staff have achieved promotion in a wide range of disciplines and grades.

One of AFBI's strategic goals is to sustain and develop our knowledge base through attracting and investing in talented people.

In support of this objective, AFBI's Learning and Development Unit provide expert advice on learning and development opportunities covering the diverse range of skills required across the organisation.

This Unit also administers AFBI's Assistance to Study programme which has provided support for 38 staff this year in their pursuit of professional qualifications specific to AFBI's business.

Recruitment

AFBI continues to develop its workforce in line with its business aims and has made a total of 38 new appointments this year, covering grades across the scientific, administrative and industrial disciplines. This number reflects both permanent and temporary appointments.

Staff in AFBI

As at 31 March 2015 the number of the staff employed by AFBI was as follows

	Males	Females	Total
Board	7	3	10
Executive Management Team	3	1	4
Other staff	478	314	792
	488	318	806

Work Experience

AFBI is committed to providing work experience opportunities for students at all levels to assist them in developing the key skills required to be successful in today's working environment.

Twelve students in higher education were given the opportunity to develop key work-related skills through a relevant, supervised work placement programme. Work experience was also given to 90 students covering a range of areas within AFBI.

Sickness absence

AFBI had an operational objective of an average of 7.5 working days lost per staff member. Northern Ireland Statistics Research Agency (NISRA) have provided an outturn figure of 8.5 days for 2014-15 (8.5 days in 2013-14).

Equal Opportunities

AFBI's commitment to equality of opportunity and to creating and sustaining a working environment where everyone is treated with respect and dignity, free from any form of inappropriate behaviour, and one in which all employees can give of their best, is embodied in the AFBI Value 'Respecting People' and its Associated Behaviours, and in the Dignity at Work policy to which AFBI adheres. This policy is available to all staff through the Human Resources Connect (HR Connect) portal and the AFBI intranet. AFBI's commitment to equality of opportunity is embedded in the equality awareness training for all staff.

Information and guidance to staff on a wide range of equal opportunity issues is available on the AFBI Intranet.

AFBI has a network of trained Harassment Contact Officers who are available to assist staff to address issues informally.

Employment of People with Disabilities

As part of its overall Equal Opportunities policy, AFBI is fully committed to ensuring that all of its policies and working practices meet or exceed the requirements of the Disability Discrimination Act 1995.

AFBI provides disabled staff with an opportunity to discuss disability issues, ensures that reasonable adjustments are made and Personal Emergency Evacuation Plans are in place where necessary.

AFBI engages with Ulster Supported Employment Limited (USEL) and Disability Action in the employment of disabled persons.

Disability awareness is embedded in equality training for all staff and information on disability issues, including articles from Disability Action are made available through the AFBI intranet.

Security of Personal Data

AFBI is committed to the safeguarding of personal data and has set in place appropriate measures to ensure its security. Detailed information has been made available to staff on the intranet site on the type of information which is considered to be private data and how it should be handled.

All members of staff have been advised that it is their personal responsibility to ensure that any document with sensitive information, including personal data, is appropriately secured and to ensure that, in the case of data held electronically, appropriate access controls are put in place to prevent unauthorised access, whether accidental or deliberate, by others. There was one incident of loss of personal data during the year 2014/15 which was handled under the AFBI Data Breach Incident Plan and was assessed as a low risk incident. This resulted from administrative error and had a satisfactory outcome having been dealt with promptly with steps taken to prevent recurrence.

Northern Ireland Audit Office

The financial statements are audited by the Comptroller and Auditor General (C&AG), in accordance with the Government Resources and Accounts Act (Northern Ireland) 2001. He is head of the Northern Ireland Audit Office (NIAO). He and his staff are wholly independent of the Institute, and he reports his findings to the Northern Ireland Assembly.

The annual fee for the audit of financial statements for 2014/15 was £33,400 (2013/14: £33,400). The external auditors have not been requested to undertake any non-audit work.

Following the 2013 Northern Ireland Audit Office (NIAO) Value for Money Review of AFBI and the subsequent Public Accounts Committee (PAC) hearing, the Institute devoted considerable effort during the year to implementing the NIAO and PAC recommendations. At the time of writing these are on track to be fully implemented by end of December 2015.

Disclosure to Auditor

So far as I am aware, as Accounting Officer, there is no relevant audit information of which the Institute's auditors are unaware; and, as Accounting Officer, I have taken all steps that I ought to have taken to make myself aware of any relevant audit information and establish that the AFBI's auditors are aware of that information.



Professor Seamus Kennedy
MVB PhD MRCVS FRCPath
Chief Executive Officer

Date: 30th November 2015

STRATEGIC REPORT



Strategic Report

Vision

AFBI's vision is to provide "Scientific excellence in Northern Ireland.... Serving the World"

Our mission

Supporting Government policy and industry innovation across the agri-food and rural sector through the provision of high quality scientific services, advice and expertise.

Corporate Goals

AFBI Goal 1

Successfully deliver the assigned work programme to the Department of Agriculture and Rural Development (DARD) and in so doing support DARD in achieving its goals

AFBI Goal 2

Provision of scientific support to DARD and other government departments and agencies in managing the impact of animal and plant health, food and environmental emergencies

AFBI Goal 3

Actively manage and grow AFBI's commercial portfolio and in so doing build our reputation as a customer-first organisation

AFBI Goal 4

Sustain and develop AFBI's knowledge base and position AFBI as a leader in the delivery of innovation and scientific support to the agri-food sector

AFBI Goal 5

Invest in our people and ensure that the best systems and processes are in place to manage our organisation efficiently and effectively

AFBI Goal 6

Ensure the long-term financial sustainability of AFBI

AFBI has an important role in assisting DARD to achieve its goals which are:

Goal 1:

To help the agri-food industry prepare for future market opportunities and economic challenges.

Goal 2:

To improve the lives of rural dwellers.

Goal 3:

To enhance animal, fish and plant health and welfare.

Goal 4:

To help deliver improved sustainable environmental outcomes.

Goal 5:

To manage our business and deliver our services to our customers in a cost effective way.

AFBI supports DARD's objectives by delivering:

- statutory, analytical and diagnostic work;
- research and development;
- specialist scientific advice;
- an emergency response capability in the context of animal and plant disease outbreaks and other emergencies in the food and environment areas.

Funding

AFBI is an NDPB sponsored by DARD. AFBI's Resource Consumption, Capital Consumption and Resource Depreciation Budgets are set for forward years as part of the NI Executive's Budget process and reviewed annually as part of the In-Year Monitoring process. AFBI also raises funds through receipts generated in the course of its operating activities and these receipts form part of the Resource Consumption Budget. The Resource, Capital and Depreciation Budgets form part of DARD's Resource Departmental Expenditure Limit (DEL) and Capital DEL, and in 2014/15 AFBI's Final DEL Outturns against budget (shown in brackets) were £36.498m Resource (budget £36.468m), £2.923m Capital (budget £2.949m) and £2.731m Depreciation (budget £2.909m), totalling £42.152m. As set out on page 27, performance on this was validated by Internal Audit as part of their annual validation exercise on AFBI's Key Performance Indicators (KPIs).

Relationship with DARD

AFBI's main point of contact is the Sponsor Branch (ASB) in the department. Regular meetings are held with the Sponsor Branch where matters relating to corporate governance, performance measurement, budgets, financing and accountability matters are discussed. A wider customer-contractor relationship underpinned by a Memorandum of Understanding also exists between AFBI's science delivery branches and the policy branches in DARD who specify DARD's required work programme.

AFBI's responses to the quarterly monitoring rounds and Comprehensive Spending Reviews are all routed through ASB.

Relationships with other Government Departments and agencies

AFBI has Service Level Agreements to provide services to the Department of Culture, Arts and Leisure (DCAL), the Northern Ireland Environment Agency (NIEA) Water Management Unit, the Department of Environment (DOE) Marine Division and the Food Standards Agency (FSA NI). It also does a significant body of work for the Centre for Environment, Fisheries & Aquaculture Science (CEFAS), Department of Agriculture, Food and the Marine, Republic of Ireland (DAFM) and the Department for Environment, Food and Rural Affairs (DEFRA) and its agencies and NDPBs.

Relationships with educational establishments

AFBI continues to co-operate on projects with both local universities and has also developed close working relationships with universities and institutions in the United Kingdom, Ireland, Republic of India, People's Republic of China, Canada and the United States of America.

Marketing

AFBI's primary goal is to support the Northern Ireland agri-food sector through specialist scientific services and cutting edge research and development. During 2014/15 AFBI worked with a wide range of local companies, delivering innovative product and process development with the support of DARD and Invest NI, as well as national and international funding bodies. AFBI Innovations managed the event delivery for: the Four-Nation, Transatlantic Scientific Forum that will define priority areas for agri-food research between the USA, Canada, Northern Ireland and Ireland, which was hosted in Belfast this year; a major joint AFBI/Livestock & Meat Commission (LMC) Beef Conference; the AFBI display at the Balmoral Show at the Maze and the National Ploughing Championships in Ratheniska, Co Laois, and the AFBI Open Meeting held at Hillsborough in September.

As part of its marketing strategy, AFBI successfully set up Twitter, LinkedIn and YouTube accounts to gain some traction within social media channels, sharing information with stakeholders, customers and the wider social media community.

Corporate Communications issued a total of 85 press releases to local and national media; 39 media interview bids were also facilitated.

AFBI continued to build its international scientific collaborations, working with the very best global agri-food research groups to ensure that through AFBI, the Northern Ireland industry has access to the best cutting edge research and innovation that is available anywhere in the world. In Europe, AFBI continued its activity, targeting the European Union's new research and innovation funding programme Horizon 2020, with considerable activity in response to the first calls.

AFBI continued to initiate and build collaborations across the USA and Canada, strengthening relationships with both government and private sector bodies, resulting in the second AFBI-led Transatlantic Scientific Forum on Agri-food Research in November 2014, this time hosted by AFBI in Belfast. This forum is now establishing itself as an annual event on both sides of the Atlantic and provides a cost effective platform for knowledge sharing, agreeing mutual regional priorities and, by means of a series of intensive thematic workshops over two days, agreeing specific topics for international collaborations which are both capable of attracting jurisdictional funding and capable of delivering measurable outputs of genuine benefit to each region.

Performance

The table below summarises performance against AFBI's 2014/2015 business plan targets with the outturn position having been validated by Internal Audit.

BUSINESS PLAN TARGET	OUTCOME 31 MARCH 2015
1: At least 95% of the DARD diagnostic and analytical tests stipulated in the Assigned Work Programme delivered to agreed time and quality standards.	Achieved
2: At least 80% of DARD Evidence & Innovation R&D projects due for completion in 2014/15 completed within the agreed time and budget.	Not Achieved While the Key Performance Indicator (KPI) target was not achieved, a number of changes to the process should improve performance in relation to this KPI in 2015/16.
3: At least 85% of DARD customers satisfied with delivery of the Assigned Work Programme and Evidence & Innovation R&D projects.	Achieved
4: Emergency response requirements reviewed and agreed with DARD and other public sector customers in-year.	Achieved
5: All emergency response contingency plans reviewed and updated in-year.	Achieved
6: Each contingency plan tested by a minimum of one desktop exercise per annum.	Achieved
7: At least two contingency plans tested by real or simulated events.	Achieved
8: At least 95% of DARD's analytical results delivered to agreed time following trigger of an emergency outbreak incident. (Appropriate KPI to be agreed following trigger of each incident).	Achieved

Continued over page

BUSINESS PLAN TARGET	OUTCOME 31 MARCH 2015
9: Generate total non-Grant in Aid (GiA) revenue of £19.1m.	<p>Not Achieved</p> <p>While not achieved, the target was only narrowly missed. The income achieved as at 31 March 2015 was £18.688m a decrease of £0.387m from the 2014/15 Business Plan target. This was primarily due to significant market decrease in the price received for milk sales and a deferral of external contracts and related income into 2015/16. AFBI mitigated the impact of these through a reduction in expenditure to deliver a balanced budget for 2014/15.</p>
10: Overall commercial customer satisfaction maintained at satisfactory or higher for 95% of completed customer feedback questionnaires.	<p>Achieved</p>
11: Develop a 7-year drawdown plan to maximise opportunities for winning competitive EU research and innovation funding through Horizon 2020.	<p>Achieved</p>
12: Develop an action plan to implement AFBI's Science Strategy and implement key 2014/15 actions.	<p>Achieved</p>
13: To complete an independent peer group assessment of the quality of AFBI's scientific work programme.	<p>Achieved</p>
14: Maintain AFBI's international standing by publishing a minimum of 80 peer-reviewed scientific papers.	<p>Achieved</p>
15: Publish 40 articles transferring knowledge, innovation and best practice to the agri-food sector.	<p>Achieved</p>
16: Participate in at least 100 events to transfer knowledge, innovation and best practice to the agri-food industry.	<p>Achieved</p>

BUSINESS PLAN TARGET	OUTCOME 31 MARCH 2015
17: Deliver the key 2014/15 actions from AFBI's Capability Review.	<p>Target Placed on Hold</p> <p>The Board agreed that this target should be placed on hold to enable AFBI to take cognisance of the out-workings of the Strategic Issues Working Group (SIWG) and the impact of AFBI's VE Scheme.</p>
18: Deliver the key 2014/15 actions from AFBI's Staff and Organisational Improvement Plan.	<p>Partially achieved</p> <p>While the overall KPI has not been met, significant progress has been made. There are 8 key objectives associated with this plan with circa 31 actions set against them. 24 actions have been completed, 4 actions are ongoing (Learning and Development, Reward and Recognition, branch structure review and Investors in People review) 3 actions are currently on hold (HR Connect Review, Capability Succession Plan and Terms and Conditions Review).</p>
19: Deliver the key 2014/15 actions from AFBI's Leadership Development Programme.	<p>Achieved</p>
20: Implement the accepted recommendations of the Northern Ireland Audit Office Value for Money Review of AFBI and the subsequent recommendations of the Public Accounts Committee in line with agreed timescales.	<p>Partially Achieved</p> <p>Implementation of the recommendations has been an area of focus for 2014/15 and significant progress has been made by the Institute in this respect. However implementation of recommendations in relation to the Benchmarking of Corporate and Unit costs remains ongoing.</p> <p>DARD, with input from AFBI, provided a comprehensive update on the status of implementation of the recommendations to NIAO in April 2015 and to the PAC in June 2015.</p>
21: Achieve combined industrial and non-industrial absenteeism of 7.5 working days or less per Whole Time Equivalent (WTE).	<p>Not Achieved</p> <p>While the target of an average of 7.5 working days lost per staff member was narrowly missed, compared to the NICS overall, AFBI performed better in 2014/15 by achieving 8.5 working days lost per staff member.</p>

Continued over page

BUSINESS PLAN TARGET	OUTCOME 31 MARCH 2015
22: Work with DARD to complete a review of the Department's Assigned Work Programme in the context of budgetary pressures from 2014/15 onwards.	Achieved
23: Work with DARD to finalise AFBI's Medium Term Financial Plan and identify solutions to address the forecasted deficits.	Achieved
24: Provisional resource outturn to be between 98.5% and 100% of the Final Budget allocation.	Achieved
25: Provisional capital outturn to be between 98.5% and 100% of Final Budget allocation.	Achieved

Financial results for the year

AFBI's Statement of Comprehensive Net Expenditure shows a net operating cost of £41,893k (2013/14: £40,225k). The increase on the prior year is due to a small rise in expenditure, a reduction in income and a rise in corporation tax due to a credit in 2013/14. Within this net position AFBI raised income of £17,982k (2013/14: £18,542k). There is a decrease in the income raised during this year for royalties, sales of milk and income from chartering the ship.

Service level agreements are agreed with Food Science Agency Northern Ireland (FSA NI) and Department of Culture Arts and Leisure (DCAL), securing funding in important areas of work. AFBI presented monthly financial reports to the AFBI Board and reviewed expenditure against budget at the Executive Management Team Meetings to ensure that AFBI's expenditure did not exceed its budgeted resources.

At the year end the net assets of AFBI is £13,754k (at 31 March 2014: £15,090k).

The treatment of pension costs is described in the accounting policy Note 1 under the heading of Pensions.

Events since the end of the Financial Year

There have been no significant events since the end of the financial year which would affect the results for the year or the assets and liabilities at the year end.

Future Funding

The outcome of each Comprehensive Spending Review determines the amount of funding available to AFBI in the future.

In view of the current severe pressures on public finances, further cuts in funding are anticipated. AFBI continues to face price increases and is actively seeking to improve its overall procurement to mitigate against these cost pressures and reduce its cost base. The impact of these factors requires AFBI to realise increased income from other commercial sources and to increase the efficiency of its operations.

AFBI is committed to widening its funding base and increasing the level of non-Grant in Aid revenue generated year on year. Particular focus is being placed on increasing collaborations with the local agri-food sector and on winning funding through international collaborations, particularly in the EU, where the Horizon 2020 Programme will fund European research and innovation between 2014 and 2020.

AFBI continues to develop international business with the support of Invest NI, UK Trade and Investment and the Northern Ireland Bureau in Washington DC.

Sustainability

Sustainability continues to be an underpinning principle of the Executive's Programme for Government 2011-15. This is a cross cutting theme and states that building a sustainable future was a key requirement of our economic, social and environmental policies and programmes. DARD was the lead department within the NI Sustainable Development Implementation Plan for strategic objective – Promote Sustainable Land Management. AFBI assists DARD in the achievement of this objective through the conduct of underpinning R&D on production of biomass and renewable energy, nutrient management bioremediation of farm and municipal effluents and greenhouse gas production by livestock and soils.

AFBI Estate

In all its land-based operations, AFBI ensures it maintains land in good agricultural and environmental condition. It is however recognised that a significant proportion of the buildings on the AFBI occupied estate are energy and carbon inefficient; prime examples being at the AFBI Newforge and Stormont sites constructed in the late 1960s/1970s. A carbon management energy efficiency survey of the Newforge site undertaken in 2009 by the Carbon Trust concluded the existing buildings at the site present challenges and barriers in terms of upgrading them to meet the inevitable drive to drastically reduce carbon emissions. The current construction of the buildings would make any refurbishment and enhancement costly with

lengthy pay back periods. It is therefore recognised under the DARD Estate Framework 2013 that modernisation and reorganisation of the AFBI estate is required to allow AFBI to make use of property assets more effectively and efficiently. Thereby an AFBI Estate Strategy is currently being developed and taken forward by the DARD – AFBI Estate Programme Board with a view to providing the Institute with an efficient fit-for-purpose rationalised estate. Outline Business Cases have been drafted for replacement of the AFBI-Stormont Main Building and for relocation of AFBI-Headquarters from the Newforge Lane site, including the proposal to develop a Centre of Excellence for Plant Sciences. The development of a Master Plan for the AFBI-Hillsborough site farm research accommodation is also underway taking cognisance of agriculture related functions undertaken at the CAFRE farms. Sustainable technologies will be considered as part of any new developments on the estate in order to achieve energy efficient facilities capable of delivering reduced whole life costs.

Energy Usage and Carbon Reduction

During 2014/15 AFBI has continued to ensure the Institute remains compliant with the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES). Energy usage across all six sites leased from DARD is measured on an annual basis and reported as part of CRCEES and to DARD for its annual Energy Report. Efforts continue to be made to reduce energy consumption both from the viewpoint of efficiency savings and reducing the carbon footprint.

Environment and Renewable Energy Centre (EREC), AFBI Hillsborough

In the Agriculture and other industry sectors, the need to reduce greenhouse gas emissions, reduce dependence on fossil fuels and increase our energy security are of growing importance and relevance within our region and as such, activities at the AFBI Hillsborough Environment and Renewable Energy Centre (EREC), have been on-going with a strong focus on research, knowledge transfer, proof of concept and project implementation.

The EREC delivers heat and electricity to the Hillsborough site from biomass and solar sources with the main sources of biomass being short rotation coppice willow, forest residues and a small amount of miscanthus grass. Heat, generated from a 320kW biomass boiler, a 120kW experimental biomass boiler, the anaerobic digestion combined heat and power (AD CHP) plant and a dedicated AD gas boiler, is delivered around the site through a heavily insulated 1.4km district heating system. The majority of the biomass is derived from plantations of short rotation coppice (SRC) willow grown at AFBI's Hillsborough and other AFBI research sites. The SRC willow is fertilised by farmyard waste water. The irrigation protocol is environmentally controlled taking account of ambient conditions through a programmable logic controller (environmentally sound and sustainable solution for waste water recycling). This research is leading to similar projects being instigated within the waste water treatment and agri-food sectors where drivers to invest in sustainable waste water management are derived from EU directives Waste Framework Directive (WFD) and customer pressure (low Carbon footprint for marketable food products). An on-site anaerobic digester, supplied with animal manures and silage, produces biogas which generates about 100kW of electricity and heat through a combined heat and power (chp) generator. About 12kW of electricity is also supplied by an array of photovoltaic cells.

Waste

Under current legislation AFBI must incinerate certain types of waste, i.e. TSE waste. This waste is transported to GB by licensed contractors where incineration takes place. Other clinical waste which can be autoclaved is autoclaved mainly on-site. Where autoclave facilities are at full capacity, AFBI uses a licensed off-site heat treatment facility. Recycling measures remain in place for paper, cardboard, plastics, glass, metal, wood, toner cartridges, batteries, waste engine oils and vehicles which are surplus to requirements.

Social

AFBI does not have a policy covering Corporate and Social Responsibility.

Internal Audit

An independent firm of auditors continue to provide Internal Audit services to the AFBI Accounting Officer and provides senior management and the AFBI Audit Committee with assurances of the adequacy of AFBI's systems of internal control and risk management.

The DARD Internal Audit unit also carried out a follow up audit of previous recommendations to provide assurances to the DARD Accounting Officer, DARD Sponsor Branch and the DARD Audit and Risk Committee that AFBI complies with the terms of the Management Statement and Financial Memorandum and other relevant legislative requirements.

Risk Management

AFBI has a risk management strategy in place setting out clear roles and responsibilities for managing risk to the achievement of the Corporate Objectives. AFBI maintains a Corporate Risk Register (CRR) which is reviewed by the Risk Management and Business Planning Group (RMBPG) and presented to both the Audit and Risk Assurance Committee and the Board on a quarterly basis.

Significant risks are escalated from Branch level, through Divisions, for consideration by the RMBPG in the context of the Corporate Risk Register.

Performance Assessment of the AFBI Board

Arrangements are in place for an annual self assessment exercise by the AFBI Board to review and refine the objectives of the Board. The Chair of the AFBI Board also sets targets for the AFBI Board and assesses the performance of the individual Board members on behalf of DARD Sponsor Branch. The performance of the AFBI Chair is assessed by DARD's Accounting Officer and Permanent Secretary and is informed by an assessment completed by individual Board members.

Compliance with DFP's Code of Good Practice on Corporate Governance

AFBI complies with all relevant requirements of the "Corporate Governance in Central Government Departments: Code of Good Practice NI" published by DFP in 2013. All members of the AFBI Board and its sub-committees are non-executives.

Supplier Payment Policy

AFBI is committed to the Better Payments Practice Code as set out in Annex 4.6 of Managing Public Money and is subject to the Late Payment of Commercial Debt Regulations 2002. AFBI comply with the British Standard for Achieving Good Payment Performance in Commercial Transactions (BS 7890).

Payment is regarded as late if it is made outside the agreed terms, or 30 days after the receipt of a valid invoice where no terms are agreed. In response to the current economic position, the Department for Business Enterprise and Regulatory Reform (BERR) announced in October 2008 that the Central Government was committed to paying businesses in 10 days.

AFBI managed to pay 94.35% (2013/2014 80%) of the invoices on AFBI's behalf in accordance with the agreed terms or within 30 days. The Business Plan target for 2014/15 was for 94% to be paid within 30 days.

AFBI had a target in the 2013/14 Business Plan progress the 10-day prompt payment target to 70% monthly performance by the year end. At average performance outturn for the 10 day prompt payment was 82%. The performance for the 2013/14 year on this 10 day target was 45%.

Complaints

AFBI can confirm that it received no complaints during 2014/15. If complaints are received these are handled through established corporate channels to ensure that these are effectively managed, responded to and if appropriate lessons are disseminated through the organisation.

Health and Safety

AFBI complies with all relevant Health and Safety legislation and where practicable with all Health and Safety best practice. AFBI has dedicated Health and Safety advisers and a system of health and safety committees within the Institute with relevant policies and guidance in place.

DIRECTORS' DIVISIONAL REPORTS



Sustainable Agri-Food Sciences Division

The Sustainable Agri-Food Sciences Division (SAFSD) operates across seven Branches: Agri-Environment; Crops, Grassland and Ecology; Plant Health and Environmental Protection; Agriculture; Fisheries and Aquatic Ecosystems; Food Science and Agricultural and Food Economics. These Branches together provide a continuum of scientific expertise across the agri-food chain, from the growing environment, through to plant and animal production systems, aquatic ecosystems, food safety and quality and finally profitability of the agri-food sector. This integrated approach ensures that the Division is well placed to address the important challenges of sustainable intensification of food production both locally and globally.

The work of SAFSD is driven by the ongoing needs of our wide range of customers. Whilst the Department of Agriculture and Rural Development (DARD) is the major customer, the Division also carries out work for other government departments and agencies such as the Department of Culture, Arts and Leisure (DCAL), the Northern Ireland Environment Agency (NIEA), the Food Standards Agency (FSA), Department of Agriculture, Food and the Marine (DAFM) in Ireland, DEFRA in the UK, as well as for bodies such as AgriSearch, the European Union, and a wide range of private customers from the agri-food industry. In 2014-15 the Division generated external income from these sources of £9.146m, an increase of over £240,000 compared to the previous year. This funding, along with Grant-in-Aid from DARD, supported a broad programme of research and development work and statutory testing in addition to the provision of specialist advice and technical services to government and industry.



AFBI at the Armagh Show.



AFBI's Environment and Renewable Energy Centre (EREC) received second prize in the category 'Best Renewables Installation within the Education, Healthcare and Public Sector' at the Action Renewables Association Awards 2015. The certificate was presented to EREC project leader Chris Johnston.



The launch at the Balmoral Show 2014 of the European Association of Animal Production (EAAP) conference to be held Belfast in 2016.

The key functions of SAFSD are to:

- Undertake basic, strategic and applied multi-disciplinary research for DARD and other government departments and agencies, industry and commercial organisations, and bodies representing the agri-food industry.
- Provide evidence-based scientific advice to government policy makers, regulators and industry, on agriculture, food, fishing and environmental issues.
- Provide a wide range of statutory, regulatory and commercial analytical services such as chemical and microbiological analyses of food and animal feed and certification and monitoring of pasture, horticultural and agricultural crops and the wider environment. This also includes maintaining specific scientific preparedness for emergency responses in these areas.

In 2014, the Executive Management Team agreed to commission a series of Peer Reviews across all of the main areas of research within AFBI over a three year period. The first review was carried out in 2014-15 and focussed on research undertaken within SAFSD's Sustainable Livestock Systems Programme and was completed at the end of March.

Seven independent experts were appointed to the Peer Review Panel which was chaired by Dr Frank O'Mara, Director of Research, Teagasc. The Panel clearly identified the need for and relevance of AFBI's research and its importance to the Northern Ireland agri-food industry. The Panel was however

critical of AFBI's overall output of peer-reviewed scientific publications and the Division has set increased targets in terms of number and quality of papers for 2015-16. .

Staff produced 68 scientific publications in refereed scientific journals during this year. Dr Dario Fornara, Agri-Environment Branch, was presented with a British Ecological Society award for being corresponding author of the most highly cited paper in its journals over the last 5 years. His paper was entitled "Plant functional composition influences rates of soil carbon and nitrogen accumulation". Also of note, Dr Colin McRoberts, Food Science Branch, had a paper published in Nature Communications entitled "*Abiotic methanogenesis from organosulphur compounds under ambient conditions*". The work was conducted in collaboration with the University of Heidelberg, the Max Planck Institute and the School of Chemistry and Engineering at Queen's University

Staff recognised during the year included Dr Sinclair Mayne, Director of SAFSD, who was presented with the Royal Association of British Dairy Farmers' Princess Royal Award by Her Royal Highness Princess Ann at Buckingham Palace. The award was made for outstanding services to the UK dairy industry. Professor Margaret Patterson, Business Manager in SAFSD, was awarded an OBE in the 2014 Queen's Birthday Honours list for her services to the agri-food Sector, especially food safety and quality.



Dr Sinclair Mayne at the presentation the Royal Association of British Dairy Farmers' Princess Royal Award by Her Royal Highness Princess Anne.



Professor Margaret Patterson who was awarded an OBE in the 2014 Queen's Birthday Honours list for her services to the agri-food sector.

The Division has established a reputation for the high quality of the work it delivers locally, nationally and internationally and examples are given below of key Branch achievements and highlights in the past year.

Agri-Environment Branch

Agri-Environment Branch operates at the 'interface' between intensive agricultural production and environmental management and regulation. Research is on-going to: (1) facilitate the development of sustainable land use management practices within a competitive agricultural industry and thus underpin the 'Going-for-Growth' Strategic Plan; (2) provide the scientific basis for government policy in relation to soil, air and water quality management; and (3) enhance environmental quality by developing strategies to help the farming industry meet specific environmental targets. The Branch has three key research programmes: Nutrient Management Research; Water Quality Research; and Biogeochemistry Research. Scientists within these programmes (*inter alia*) have been influential in a range of national and international expert groups and platforms, including the high profile EU EIP (European Innovation Partnership)-AGRI Focus Group on Permanent Grassland. Outputs have included 18 publications in refereed high-impact scientific journals and a further 7 submitted, 36 conference proceedings/presentations and 16 items of technology transfer.

The Branch provided vital research evidence enabling the DARD/DOE/AFBI negotiating team to revise specific measures in the Northern Ireland (NI) Nitrates Action Programme (NAP) during the recent review process with the European Commission. In particular, research evidence was used to revise phosphorus (P) recommendations for grassland in the NI Phosphorus Regulations and to reduce P availability coefficients for organic manures in the NAP Regulations to ensure that sufficient amounts of plant-available P are permitted to match crop requirements on low P soils. These changes were approved by the European Commission in December 2014 and are being implemented under the 2015-2019 NAP.



Stakeholders at the INTERREG IVa funded DOLMANT project pictured at its closing event at Oxford Island.

The Branch continues to make a significant contribution to the scientific evidence base necessary to balance the water quality objectives of the EU Nitrates Directive, Phosphorus Regulations and Water Framework Directive against the targets established for NI agriculture in the 'Going for Growth' Strategic Plan. In the past year the Branch has conducted research on the risks posed to water quality from legacy soil P, has delivered an ecological lake management tool (EU INTERREG IVa funded DOLMANT project) to NI stakeholders to inform the management of water bodies for the EU Water Framework Directive; and continued the long term monitoring of the Lough Neagh and Lough Erne systems. In addition, the Branch is leading a research review on the impact of agriculture on water quality in Ireland with the aim of identifying future research requirements in this area. This research has been extended to include identification of new models for Knowledge Transfer and Innovation to support sustainable intensification of agriculture in Ireland. The branch has established key national and international collaborative links through the North Western European Science-Policy working group on mitigating nutrient emissions from agriculture and is also involved with the US-based Phosphorus Research Coordination Committee. The Branch hosted a meeting of the North Western European Science-Policy working group on mitigating nutrient emissions from agriculture and a meeting of the Common Implementation Strategy Group for Agriculture and Water Framework Directive Water this year.



Measuring gaseous emissions at AFBI Hillsborough as part of the UK GHG Inventory Programme.

The Branch has completed its experimental input to the UK Greenhouse Gas (GHG) Inventory Programme (funded by DEFRA and the Devolved Administrations) and the data is currently being used by modellers to improve the UK GHG Inventory. The Branch is continuing to contribute to the Agricultural Greenhouse Gas Research Initiative for Ireland (funded by the Department of Agriculture, Food and the Marine), which includes investigating mitigation strategies for N_2O emissions and enhancing carbon sequestration in grassland soils. In addition, long-term monitoring and experimental investigation of soil quality is providing the basis for sustainable soil management as well as supporting NI's continued derogation under the EU Nitrates Directive. AFBI is collaborating with Teagasc and University College Dublin on a DAFM funded project to measure NH_3 emissions associated with dairy and beef housing and grazing systems; model NH_3 emissions from farms; and, quantify the abatement potential of mitigation strategies (which include: dietary

strategies to reduce excreted N; slurry treatment to reduce volatilisation; and manipulation of housing and storage to reduce volatilisation). AFBI is lead partner in using stable isotope (^{15}N) techniques to trace N dynamics in slurry during storage and to test novel additives to reduce ammonia emissions from animal house flooring. The Branch successfully completed the technical review of the 2014 LPIS QA (Land Parcel Identification System, Quality Assessment), which is a mandatory EU annual requirement to assess the validity of the LPIS maintained by DARD.

Crops, Grassland and Ecology Branch

Crops, Grassland and Ecology (CGE) Branch investigates the diversity and range of forage, grain, energy and horticultural crop plants which can be successfully grown and could have a potential future in systems seeking to cope with sustainable intensification and predicted climate change.



A red clover trial is carried out each year for both the DARD Recommended List for Grass and Clover and the UK National List.

The branch has a key focus in keeping the industries it supports at the forefront of technology and competitive advantage through its delivery of 120 technology transfer events, 26 technology transfer articles while promoting the technical skills of its staff through 22 technical reports and 13 refereed papers over the year.

The Recommended Lists for cereals and varietal testing of potatoes through to the cooking quality stage helps the arable and potato sectors in NI remain fully competitive. The branch's research on apple production is fully embedded in the industry and continues to address storage, crop density and variety diversification.

Breeding improved varieties of forage grasses and potatoes is a fundamental aspect of improving productivity on farms. The branch's grass breeding programme has had a highly successful year with the commercial release, in conjunction with our commercial partner Barenbrug, of a new late diploid variety Clanrye. Further success has been achieved with the addition to UK Recommended Lists of three new AFBI-bred perennial ryegrass varieties, Glenarm, Caledon and Ramore. These varieties set new, high standards for productivity and herbage quality and will be released to commerce in spring 2017.

The Value for Cultivation and Use (VCU) of new grass and clover varieties is tested at Crossnacreevy

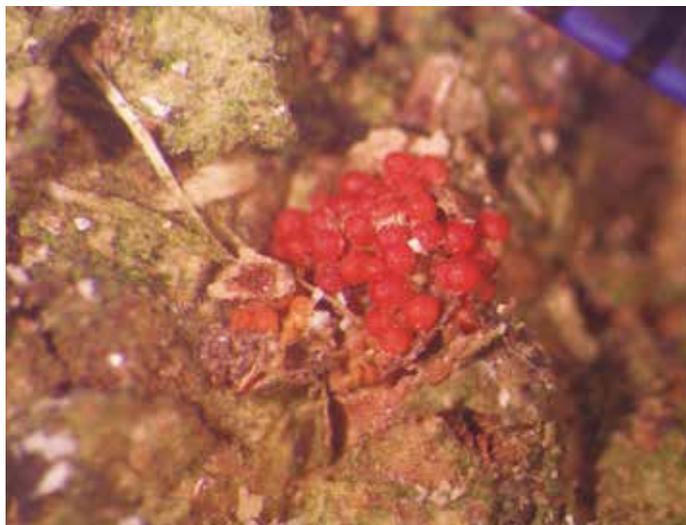


Alley Coppice (AC) system with poplar trees intercropped with willow. Photo: Rory Lunny.

for the DARD Recommended List of Grass and Clover for Northern Ireland and also for the UK National List. In 2014 new trials were carried out for 3 major European grass breeders as a commercial service supported by Crossnacreevy's Europe-wide successful track record.

A DARD Evidence & Innovation (E&I) project on *Underlying Factors affecting Mushroom Disease Control* in association with 'MushTV' (an EU-FP7 project) has provided Integrated Pest Management (IPM) solutions for '*Trichoderma* Green Mould', a disease that has caused severe economic problems across Europe. AFBI-led research, provided a greater understanding of the epidemiology of *Trichoderma aggressivum* - how it grows and is dispersed through the Bulk Phase III composting system. Best Practice Guidelines on essential detection, prevention and eradication procedures to be implemented for *Trichoderma* were established and communicated to Industry through an intense Knowledge Transfer process.

The ongoing monitoring and data interpretation of four commercial, coppice willow based irrigation systems, (40 ha), developed through the ANSWER (Agricultural Need for Sustainable Willow Effluent Recycling) project, together with the data from the implemented DARD trials, have convinced government to consider these solutions as a means to reduce carbon footprint, energy costs and maintaining Water Framework Directive Compliance.



Neonectria on Sitka showing fruiting bodies.

Two PhD studies at Loughgall are underpinning and further developing the potential of renewable energy crops- '*The Effect of Nitrogen Nutrition on SRC Willow*' is delivering important nutritional and management data for willow growers and – '*A Novel Land Use System Combining Agroforestry with Coppice Willow*' has shown how the variation in spatial interactions of the two renewable cropping systems can be manipulated to give maximum biomass yield.

Plant Health and Environmental Protection Branch

This Branch has an important role in identifying and monitoring plant disease and provides information and advice on disease management and control to DARD and commercial customers. During 2014/15, the Branch's Plant Health team have provided diagnostic and advisory support to both DARD and DAFM, with over 1500 diagnostic tests carried out on suspect tree samples during the year. In addition to the routine detection of ash dieback (*Chalara fraxinea*) and *Phytophthora ramorum*, staff have worked with colleagues from the Republic of Ireland to identify a new pathogen, *P. Pseudosyringae*, attacking larch. This finding has significant implications for forestry throughout the British Isles. The Branch also identified a potentially serious new fungal pathogen (*Neonectria fuckeliana*) on Sitka spruce, a major NI forest species. Investigations on this fungus are continuing in collaboration with DARD Forest Service.

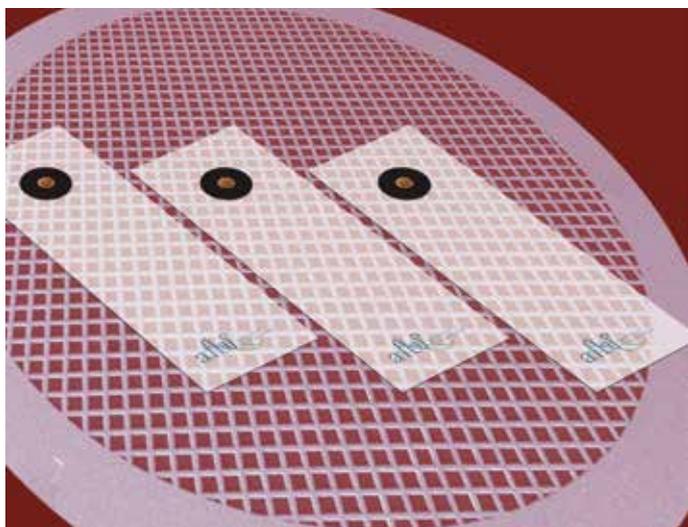


Spraying of pesticide on farmland using a tractor mounted crop sprayer.

The Pesticide Usage Monitoring Group (PUMG) maintained its annual contract with DEFRA, contributing to the UK report on pesticide use in vegetable and grassland crops. PUMG records the use of crop protection products across all sectors of the agricultural and horticultural industries in Northern Ireland. The data collected provides information for consideration by the UK Expert Committee on Pesticides. This work is accredited by National Statistics, and the data may also be used by those involved in residue testing, environmental impact studies, evaluation and regulation of trends in pesticide usage and for public information.

The Entomology group continued to provide specialist support to Government regarding a wide range of threats to agriculture and forestry. Continuing research on vectors of animal diseases, a novel technique for comparing attack rates on cattle and sheep was developed, which also demonstrated colour and orientation preferences of biting midges.

Statutory surveillance of local forests for non-indigenous pests has been revised to include the emerald ash borer, longhorn beetles and oak processionary moth. Horse chestnut leaf miner was detected in Northern Ireland for the first time. Although likely to cause unsightly mines on leaves, the prognosis is that the trees recover from the initial defoliation.



AFBI biosensor chip for detection of chemical pollutants.

Bee health continued to be a cause for concern. AFBI monitored overwintering survival of colonies and worked with DARD to provide advice on contentious issues such as the impact of neonicotinoid insecticides and disease.

The management of abiotic and biotic stresses in crop and horticultural plants is a high priority research area for the Branch. The EU-FP7 BIOFECTOR project is evaluating seaweed extracts and phosphorus solubilising- cold adapted microorganisms for enhancing yield of low input winter wheat.

Fundamental research undertaken by PHEP branch has developed a new biosensor for detection of environmental pollutants. The process involves a novel layering technique which provides a high quality signal with enhanced Raman spectral bands. Utilising lower cost materials, the team have developed a novel nano-structured metal surface allowing for high sensitivity, reproducibility and a greatly enhanced signal to noise ratio. The novel AFBI SERS substrate can detect environmental pollutants (for example rhodamine, melamine and glyphosate) as low as ppb concentration. The Biosensor may have other applications such as detection of viruses and bacteria.



Grazing cattle at AFBI Hillsborough.

Agriculture Branch

Agriculture Branch resources are focused on research that addresses the sustainability of Northern Ireland's economically important livestock production sectors and helping them grow their contribution to the economy. This extends to developing and proofing novel ways to measure and mitigate the impact of our production systems on the natural environment, especially on climate change, and the associated marketing advantages.

As evidence of the relevance and value of the work to the local agri-food industry, Agriculture Branch scientists were involved, during 2014/15, in 14 ongoing DARD Evidence and Innovation projects with a total value in excess of £5.3 million. By definition, the subjects of these projects are policy priorities for DARD, and align closely with strategic targets within the Departments "*Going for Growth*" strategic action plan in support of the Northern Ireland agri-food industry. The livestock research programmes are underpinned by the Hillsborough analytical services laboratory which also offers a commercial forage analysis service to the dairy, beef and sheep sectors, with customers throughout Ireland and parts of GB.

During 2014/15, the Branch also led on three DARD Research Challenge Fund projects (50% industry funded) and were significant partners in three EU Framework 7 projects (SOLID, GPlusE and ECO-FCE which address, respectively, low input dairying,



Lameness studies in sheep.

genomics for dairy selection and drivers of feed efficiency in pigs and poultry), bringing another £0.8 million into AFBI.

The research programme is complemented by well embedded mechanisms for timely knowledge transfer to the local industry, which include specialist seminars and conferences and advisory literature for farmers (prepared in partnership with local levy funders AgriSearch and PigRegen) as well as the more traditional conduits of farming press releases, magazine articles and television or radio broadcasts.

Through mutually beneficial links with AgriSearch, the branch has developed an extensive on-farm research network that currently involves over 60 farmer co-researchers across Northern Ireland in the structured collection of valuable data. These farms are used as bases for informative Farm Walks that attract large numbers of farmers from across Northern Ireland and beyond. The merit of this innovative approach was acknowledged in the recent AFBI peer-review and the on-farm research programmes are now widely recognised as being amongst the most effective mechanisms for knowledge exchange with the industry.



Silage fed cattle at AFBI Hillsborough.

Each year, the Branch hosts one or more Open Days at the 310-hectare Hillsborough research farm in addition to many smaller scale visits by Ministers, MPs, MEPs and MLAs, academics, industry leaders (in services, manufacturing and retail) and fellow researchers, as well as university, college and school students and farmer's groups.

These generic knowledge transfer outputs complement academic outputs to peer-reviewed academic journals and to national and international research conferences. In 2014-2015, Branch staff authored or co-authored 30 scientific papers with a further 9 submitted for consideration, while 46 conference presentations were delivered.

Nine new postgraduate students commenced PhD studies under the supervision of Agriculture Branch researchers in 2014/15, bringing the current total of students to 21. Students are primarily based at Hillsborough but also spend time at other centres including the Queen's University of Belfast, Ulster University and University College Dublin campuses and Teagasc research stations. Topics include aspects of the nutrition of sows and dairy cows, stress associated with or arising from beef cattle housing and grouping practices, grass and clover physiology and utilisation and its relevance for NI livestock production, and the carbon footprint of Chinese agricultural production.



Herring from the Irish Sea. This fishery achieved Marine Stewardship Council accreditation in 2014, based on several years of AFBI collaborative scientific work with the fishing industry.



A durometer has been successfully used to test for shell softness in brown crab.

Fisheries and Aquatic Ecosystems Branch

Marine fish stock assessment work in 2014 provided scientific support to policy customers during a challenging year towards delivering a reformed Common Fisheries Policy. AFBI science was used by the DARD Minister in 2014 to successfully challenge a 14% cut proposed by the European Commission in the total allowable catches (TAC) of the *Nephrops* (prawn) fishery in the Irish Sea, with a 3% uplift being achieved.

Catch opportunities for haddock in the Irish Sea were also maintained despite the Commission's proposal for a 20% reduction. Close collaboration with the fishing industry to improve knowledge of Irish Sea herring saw a positive outcome in 2014, with the Irish Sea Herring Fishery being awarded Marine Stewardship Council (MSC) certification for sustainable fishing.

The past year saw the completion of the European Union (EU) INTERREG funded Oil Spill and Response at Local Scales (SPRES) project, which has developed high resolution marine oil spill simulation and risk models. Work in the field of marine bio-acoustics was extended, with postgraduate students researching cetacean movements and marine noise pollution using towed passive acoustic arrays. This will contribute to member state reporting requirements under the EU Marine Strategy Framework Directive (MSFD).

Seabed mapping projects contributed critical evidence to influence Marine Conservation Zone designation programmes, with new seabed habitat maps being produced for Strangford Lough and Dundrum Bay, and habitat data collected in deep waters (230m+) off Rathlin Island. Commercial work in this field included benthic assessments for two important commercial projects, the Moyle Electricity Interconnector and Fairhead Tidal Development. In 2014-15 the branch continued work in support of the aquaculture industry, including DARD directed work to provide annual seed mussel stock assessments and directly with industry on experimental mussel spat collectors deployed within Belfast Lough.

In May 2014 AFBI was awarded a European Fisheries Fund grant to extend our study of lobster populations around the Northern Ireland coast. Staff worked closely with fishermen to gather data on lobsters through observer trips and to greatly extend an existing lobster tagging study. Over 4,000 lobsters have now been tagged around Northern Ireland with excellent cooperation from local fishermen. Other inshore fisheries work included a study to investigate potential mechanical methods for identifying soft shelled crab (crab which has just moulted and has poor quality meat), which should be returned to the water alive.



Brown crab (*Cancer pagurus*).

In early 2015 the branch commenced a study of the oceanography of the western Irish Sea, to investigate the physical dispersion of fish eggs from the coastal nursery grounds. This will lead to modelling to investigate how climate change may influence the dispersion of fish larvae and potentially impact fish recruitment into the adult populations of commercial stocks. The Branch continued to lead the UK development of indicators for tracking changes in the composition of marine plankton as part of the UK's effort to develop a suite of ecosystem targets and indicators for the Marine Strategy Framework Directive.

In 2014, the Department of Culture, Arts and Leisure (DCAL) initiated development of fishery management plans for large lakes and their catchments, with Loughs Neagh and Erne as priorities. This required significant new work from the Branch, with a need for integration of existing stock assessment programmes and expansion into the new plans to bring in other species including pollan, trout, perch, roach and bream. Migratory fish species including salmon and eels have particular management requirements, as they occupy freshwaters in local jurisdictions and internationally shared marine waters, therefore the AFBI annual stock assessments for DCAL are also critical to international management negotiations.



Pat Close, CEO of the Lough Neagh Fishermens Cooperative Society (LNFC) with PhD student Conor Dolan & Dr Derek Evans of AFBI at the commissioning of a project on the male European eel. Conor's PhD is directly funded by the LNFC from the Fr Oliver Kennedy Bursary.

AFBI holds vital databases on these stocks and Branch staff are key players on international salmon and eel working groups. AFBI evidence on survival of wild salmon stocks prompted DCAL to introduce mandatory catch and release for salmon recreational angling throughout its jurisdiction in 2014. Further detailed analysis by the Branch of individual rivers subsequently enabled a refinement to this policy, with some angler harvest quotas having been introduced for three river/lake systems including Lough Melvin.

Food Science Branch

Food Science Branch (FSB) provides research, services and specialist advice on the chemistry and microbiology of food. Scientific expertise in analytical chemistry, biochemistry, microbiology, molecular techniques and sensory science are applied especially to meat and dairy products, but also to fish, fruit and vegetables. With AFBI's strengths in primary production, expertise can be provided through to the quality, safety and consumer perception of the end product, providing a strong "supply chain approach".

During 2014/15, FSB generated an income of £1.6m, an increase of £400k from 2013/14, mainly from food industry customers, DARD, Food Standards Agency (FSA), the Department of Agriculture, Food and the Marine (DAFM), InnovateUK and SafeFood.



Food Science Branch offers a full range of objective and subjective sensory evaluation methodologies, conducted according to ISO and BSI standards, for research and commercial testing.

Food Science Branch works with numerous collaborators from NI, UK, ROI, France, Poland, Australia and USA. The recruitment during the year of three senior scientists in meat chemistry, food pathogens and sensory analysis will further enhance the capability offered by AFBI.

FSB has continued to provide independent research helping food companies to generate new business and respond to retailer demands. For reasons of confidentiality, the following examples are taken from the public-funded research.

Research (DARD) evaluated sirloin from dairy and dairy/beef cross-bred animals to understand differences in eating quality. This work confirmed that dairy beef is of particularly high sensory quality and suggested that this is not just due to elevated marbling, but is also related to the formation of



Olivia Smiddy (right) assessing the odour of compounds contributing to pig-house odour, at a presentation on "Pigs, Pongs and People" given by Linda Farmer (left) in March 2015.

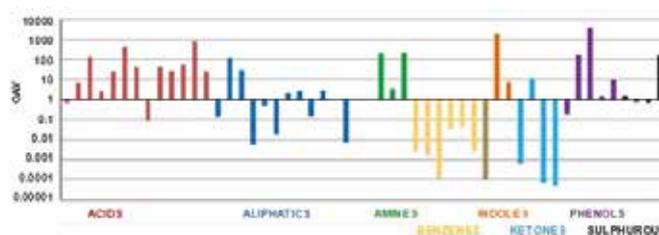


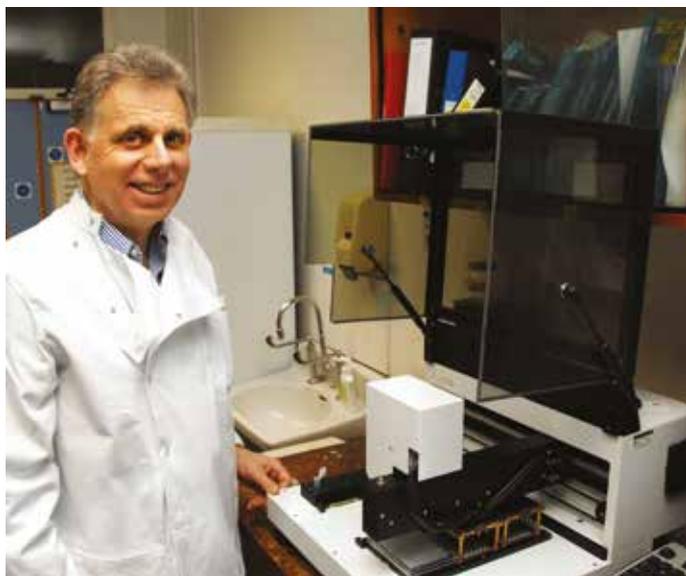
Figure 1. Compound classes with a high odour activity value (OAV) contribute most to pig-house odour.

precursors of desirable beef flavour. This finding is new and suggests future avenues for research.

During the year, a Sensory Network for Ireland was funded by DAFM to provide a service to industry and encourage linkages between sensory practitioners across the island of Ireland. AFBI is a core partner and is unusual in offering a full range of instrumental, sensory and consumer methods for measurement of sensory quality and statistical support.

A project on the quality of reduced fat omega-3 fortified Cheddar cheese has demonstrated that it is possible to produce a good quality cheese fortified with omega-3 fatty acids that meets the requirements of sensory panellists.

A re-evaluation of the published data on the odour compounds using "odour activity values" has identified the main compound classes contributing to the problem of noxious odour from pig houses (Figure 1). This work has suggested that a combination of mitigation factors may be needed.



Meat hygiene testing is offered to industry customers by Malcolm Taylor and his team.

FSB staff have extensive skills and experience in the isolation and characterisation of food-borne pathogens, including *Listeria*, *Campylobacter*, *Salmonella*, *Legionella* and other food-borne pathogens. Several specialist surveys were funded for antibiotic resistant *E. coli* and *Campylobacter* species during 2014/15. Services are offered to commercial customers on food spoilage organisms and pathogens, using PCR and other modern molecular techniques. New research on the role of gut microflora has been initiated.

The High Pressure Processing pilot facility has enabled numerous businesses to test the potential of this new technology and, in some cases, to produce product for sale. During 2014/15, FSB has worked with customers to evaluate the commercial potential of a large High Pressure Facility which opened in Dublin in September 2014. One of the customers of the AFBI facility won "Ulster Tatler Awards, Businesswoman of the Year" for her high pressure-treated product.

FSB conducts chemical and instrumental analyses on contaminants, pesticide residues and radionuclides in food and the environment and provides an emergency response capability to DARD and other government departments. Research for FSA has examined the impact of preparation and processing on the bioavailability of

pesticide residues and their metabolites in fruit. This work has led to the FSA making recommendations to consumers.

Agricultural and Food Economics Branch

Agricultural and Food Economics Branch (AFEB) is one of the leading socio-economic research centres in the UK with a strong reputation for providing decision support to the policy, Non-Governmental Organisation (NGO) and private sectors. Its work programme encompasses the economics of farm businesses, rural households, agri-food systems and the rural environment, along with an extensive programme of policy impact analysis. Research outputs are presented in accessible formats for stakeholders via policy and practice briefs, reports, research papers, seminars and tailored knowledge transfer events. In 2014/15 its main customers were: DARD, DEFRA, the Scottish Parliament; and the Welsh Assembly Government.

Demand for rigorous socio-economic evidence to support policy and industry decision making has grown very significantly in recent years and during 2014/15 the Branch was engaged in 16 active research projects funded by DARD. AFEB was successful in securing a new three year contract and funding of £647,000 for its Food & Agriculture Policy Research Institute (FAPRI-UK) policy analysis programme, undertaken on behalf of the four UK administrations. AFEB was also active in seeking external funding from other sources such as the Global Innovation Initiative in the USA and the UK Processors & Growers Research Organisation.

Staff members continued their active engagement with policy makers and industry in addition to presenting their research findings at national and international research conferences. Dr Ziping Wu was an invited keynote speaker at an EU Experts' Workshop in Brussels on '*Food Safety of Agri-food Products in the Context of Research and Innovation Co-operation Between the EU and China*' to define the theme of a proposed major EU-China agricultural research project. Dr Wu shared his extensive knowledge of China's agri-food sector, food safety management and trade issues to inform the socio-economic component of the proposed research.

The Brussels workshop marked the first step in developing a joint EU-China research project on food safety. Dr Myles Patton and Dr Siyi Feng were invited by Defra to give a presentation on *'Aspects of the New CAP and Managing Market Risk'* in a Symposium at the 88th Annual Conference of the Agricultural Economics Society in Paris in April 2014. Drawing from research undertaken as part of the FAPRI-UK project, Drs Patton and Feng provided insights on sources of uncertainty and its management within EU agricultural commodity markets. Research on skills levels within the agri-food sector led by Dr Claire Jack identified skills gaps across a number of areas within the sector and explored links between skills and innovation in the sector. This research had a major impact in informing key areas of DARD policy and the work of the Agri-Food Strategy Board. Research on educational attainment levels amongst farm operators contributed significantly to the evidence needs of the Rural Development Programme, for example in the introduction of an educational requirement for participation in the CAP Young Farmers' Scheme and the implementation of a new Level 2 agricultural training course delivered through CAFRE.

AFEB welcomed two new Ph.D. students to begin their studies: Annabel Sharma (DARD Scholarship) who is exploring the regulatory efficiency of the Water Framework Directive in Northern Ireland and Adewale Adenuga (Walsh Fellowship) who is exploring the Regional Implications of EU Milk Quota Abolition for the Irish Agri-Food Sector. AFEB also paid host to two international visitors. Dr Juan (Carrie) Yang from the Shanghai Academy of Agricultural Sciences (SAAS) explored the economic impact of greenhouse gas emissions in China using data from the SAAS Experimental Station Farm. A visit by Dr Silviu Stanciu, Associate Professor in Dunarea de Jos University of Galati, Romania was supported by the EU EXCELIS Exchange Program; he presented a seminar entitled *'Food Safety Incidents and Impacts on the Meat Sector in Romania'*.



Dr Ziping Wu speaking at an EU Experts' Workshop in Brussels on *'Food Safety of Agri-food Products in the Context of Research and Innovation Co-operation Between the EU and China'*.

Over thirty policy briefings and research reports were completed with specialist presentations being made to, for example DARD's Policy Divisions, external research funders (DEFRA, Scottish Parliament, Welsh Assembly Government) and to Dairy UK and the LMC. Stakeholder events were attended by a wide range of public and private sector stakeholders including DARD, CAFRE, LMC, Dairy UK and the Ulster Farmers' Union.

Branch staff represented AFBI on the scientific committees of the British Agricultural Economics Society; the European Association of Agricultural Economists; and the UK Network of Environmental Economists. Professor Davis continued in his role as Chief Editor of *EuroChoices*, the international outreach journal on agri-food and rural economics; this included publication of a special issue on Small Farms in Europe to mark *International Year of Family Farming*.

Veterinary Sciences Division

During the year, AFBI's Veterinary Sciences Division (VSD) continued to undertake integrated programmes of work in relation to animal health and welfare, and the protection of public health by ensuring the safety of food of animal origin. The division currently employs approximately 260 veterinary, scientific, technical and support staff across its five scientific branches i.e. Bacteriology, Chemical Surveillance, Disease Surveillance and Investigation, Immunodiagnostic and Virology branches. This work assists DARD in achieving its strategic goals, particularly those of enhancing animal, fish and plant health and animal welfare, and helping the agri-food industry prepare for future market opportunities and economic challenges.

The major work themes of the division are statutory testing, emergency response and contingency planning, animal disease surveillance, research and development, and commercial services and industry support. An important feature of the work of the division is the interdependency and linkage between these work themes. For example, VSD's emergency response capability is dependent on the scientific capacity that resides within the statutory and animal disease surveillance work areas and that is developed as a result of participation in DARD-funded R&D programmes and a range of internationally competitive research and development projects.

The division has multidisciplinary scientific capability in the areas of:

- Microbiology
- Molecular biology
- Genetics
- Immunology
- Serology
- Parasitology
- Pathology and histopathology
- Chemical surveillance
- Epidemiology
- Ecology
- Veterinary investigation and advice



Association of Veterinary Surgeons Practising in Northern Ireland (AVSPNI) meeting at AFBI Omagh.



Testing samples of animal tissue for residues of veterinary medicines in Chemical Surveillance Branch AFBI Stormont.



L-R: Mari Speijers Simon Doherty, Helen Hartley, David Mathews, Graham Finney, Clare Jack and Angela Lahueita-Marin launching a survey seeking opinions from NI farmers on disease prevention and control measures.

A significant milestone in disease eradication was achieved this year when in March 2015 DARD applied to the EU for Official Brucellosis Freedom. This followed the required three-year period since the last culture confirmed case of *Brucella abortus* infection, and work to control and eradicate this costly and zoonotic disease stretching back over a number of decades. The serology testing, culture of reactors and supporting molecular work at VSD has been a significant underpinning factor in NI achieving the current disease status.

The quality of scientific testing provided to DARD and other customers is an essential part of the work of the division and is overseen by a dedicated quality assurance unit. AFBI holds two internationally recognised quality assurance standards providing customers with a formal recognition of the technical competence, impartiality, performance and capability of a laboratory with ISO17025:2005 accreditation maintained for statutory testing in accordance with regulatory and customer requirements. During the year a new electronic quality management system was procured to manage the expanding range of accredited work undertaken.

While traditional microbiological skills remain fundamental to the work of VSD, advances in molecular diagnostics and the associated data and epidemiological modelling are becoming increasingly important to our epizootic, statutory and R&D functions. AFBI has developed a genomics strategy to direct prioritisation and lead programmes of work in this rapidly growing area of science. During the year, AFBI further expanded its capability and capacity in genomics, with the purchase of a next generation sequencer. This has positioned AFBI well to contribute to cutting-edge research to deliver scientific advances in the area.

Bacteriology Branch

The Bacteriology Branch undertakes an integrated programme of statutory, diagnostic and R&D work on the major bacterial pathogens of animal and public health significance. Major components of the work include laboratory testing and confirmation of bovine TB (bTB), brucellosis and *Salmonella* species



Badger image captured by remote camera in farmyard.

under the DARD Assigned Work Programme. The Branch has an international standing in TB research and extensive collaborations and linkages exist with other research organisations and centres of excellence in Europe, North America and globally.

The work of the Branch utilises a range of specialised bacterial culture and molecular approaches to detect and characterise the pathogens involved; for statutory work, these tests are UKAS accredited to international standards under ISO17025. One example includes the ISO17025-accredited DNA identity and parentage testing which is used to support DARD's initiatives to detect and deter animal identity fraud. This service is also included in the British Movement Service list of laboratories approved for the provision of DNA parentage testing. All laboratory services provided to the Department were fully delivered to the agreed time and quality standards.

During the year, Bacteriology Branch provided support to DARD's bTB badger Test-Vaccinate-Remove (TVR) project through the provision of laboratory services, mapping services and field support. The Branch also provided written and oral submissions to the newly-formed independent TB Strategic Partnership Group to support the development of a long-term strategy for bovine TB control in NI. AFBI's contributions to the Group particularly focussed on research priorities and the role of research in helping to control and eradicate this difficult and costly disease.



Dr Adrian Allen was awarded a Fulbright Scholarship to the United States to study the molecular epidemiology of *Brucella abortus*.

Notable scientific outputs during the year from the Branch included a further paper from the Biotechnology and Biological Sciences Research Council (BBSRC) -funded collaboration between the Roslin Institute (University of Edinburgh) and AFBI in the area of TB genetics. The paper, which was published in May 2014 in the journal 'PLOS ONE', outlines evidence that genomic prediction and selection are feasible for TB resistance in dairy cattle. A DARD funded literature review on *TB risk associated with slurry* was completed and attracted interest from various groups. Oral presentation of the review findings was made to the DARD TB Steering Group and the DARD TB Stakeholder Group. Findings from an analysis of interferon gamma testing were also provided to DARD to inform policy decisions in this area.

Previous collaborations between AFBI and the University of Glasgow in the areas of whole genome sequencing (WGS), has led on to a further R&D project starting during the year. This new project, funded by the US-UK Ecology of Infectious Diseases Initiative, is investigating bovine TB and Johne's Disease transmission using disease modelling and bacterial WGS and is led by the University of Cornell, USA.

Bacteriology Branch was invited to join two scientific networks - a European Network for research on animal TB infection and the Global Research Alliance for bovine tuberculosis (GRAbTB). The latter includes partners in Europe, North

America, South America, South Africa and New Zealand. These networks further build upon the international linkages and collaborations that already exist between AFBI and other centres of excellence. These networks further build upon the international linkages and collaborations that already exist between AFBI and other centres of excellence. Dr Adrian Allen, a Senior Scientific Officer in the branch, was awarded a highly prestigious Fulbright Fellowship to investigate the genome epidemiology of *Brucella abortus* in Northern Ireland. This work will be conducted in association with the University of New Hampshire, USA.

Chemical Surveillance Branch (CSB)

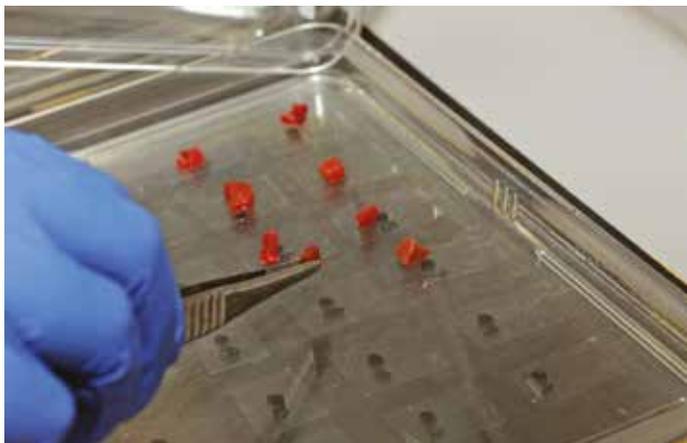
CSB undertakes testing for DARD, the Food Standards Agency (FSA) and commercial customers in the area of veterinary drug residues and marine biotoxins. The Branch is the UK National Reference Laboratory (NRL) for most of the banned veterinary drugs and also for marine biotoxins. The risk based 'Residues in Sheep and Cattle' scheme introduced in 2013/14 has continued to highlight non-compliance problems with the flukocide closantel. In one instance, a high result for this drug led to the FSA issuing an alert under the Rapid Alert System for Food and Feed (RASFF) and a product recall. To reduce the risk of further RASFFs, at DARD and industry request AFBI has instigated a fast track testing procedure for closantel where sampled carcasses are detained pending the laboratory result.

Several non-compliant results for the non-steroidal anti-inflammatory drug phenylbutazone were detected in cattle during 2014/15. This drug is not licensed for use in food producing animals and was of particular concern during the horsemeat incident in 2013. A new method to confirm Ractopamine, a beta-agonist, in muscle was validated by Liquid chromatography-mass spectrometry (LC-MSMS). A bespoke multi-analyte LC-MSMS procedure was developed in a collaboration project with RIKILT, The Netherlands. CSB maintained ISO 17025 accreditation for all of its test methods at its annual United Kingdom Accreditation Service (UKAS) audit in October 2014. During the year the Branch was also audited for compliance with the applicable EU legislation by the UK Central Competent authority – the Veterinary Medicines Directorate

(VMD). CSB staff continued to act as scientific advisers/assessors to the UK Veterinary Residues Committee and the Advisory Committee on Animal Feedingstuffs.

CSB met all its FSA KPI targets for marine biotoxin testing turnaround times in 2014/15. In its role as National Reference Laboratory for Marine Biotoxins, CSB provided scientific advice to FSA and attended the European Reference Laboratory annual workshop and working group meeting on the detection of lipophilic toxins by LC-MSMS. CSB also provided scientific advice to FSA at the Codex Committee on Methods of Analysis and Sampling (CCMAS) working party on marine toxins, held in Brussels in February 2015.

In addition to the statutory and analytical work undertaken for DARD and the FSA CSB also provides commercial and consultancy services for a range of customers nationally and internationally. During the year the Branch welcomed visiting scientists from Pakistan and China for several months training in residues analysis. Notably scientific publications during the year included a review of the analysis of coccidiostat residues in food and a second which presented a series of studies investigating the sources of contamination of cattle with phenylbutazone. CSB staff were invited speakers at the International Meat Traders Association, London and at a Food and Agriculture Organisation of the United Nations (FAO) Seminar, Santiago, Chile and presented posters at the 7th International Symposium on Hormone and Veterinary Drug Residue Analysis in Ghent, Belgium.



Preparation of animal tissue samples in Chemical Surveillance Branch, for testing for veterinary drug residues.



DSIB undertakes surveillance for tapeworm parasite *Echinococcus multilocularis* (inset) in foxes.

Disease Surveillance and Investigation Branch (DSIB)

The animal disease diagnostic service, operated by AFBI's Stormont and Omagh veterinary laboratories, helps to safeguard animal and public health and promote the competitiveness of the agri-food industry by identifying the causes of disease in submitted material. Surveillance for notifiable, zoonotic (transmissible to humans) and emerging diseases forms an important part of this work. The work undertaken includes the post-mortem examinations of food producing species and an extensive range of clinical pathology tests. Statutory work undertaken by the branch includes histological confirmation of bovine tuberculosis and transmissible spongiform encephalopathies and a surveillance scheme for *Echinococcus multilocularis* in foxes. DSIB staff took part in an all-island working group on *Echinococcus multilocularis* surveillance.

The first case of large animal associated methicillin resistant *Staphylococcus aureus* (LA-MRSA) in Northern Ireland was detected in a pig from a local farm submitted for post-mortem examination to the Omagh laboratory in June 2014. Follow-up epidemiological investigations were carried out on the farm and further detailed molecular typing by Public Health England showed the isolate to be strain CC-398, which has been previously reported in livestock in a number of European countries.

DSIB and colleagues from AFBI Hillsborough were successful in securing funding for a project on



All-Island Disease Surveillance Report 2013, prepared by DSIB and the Department of Agriculture, Food and the Marine in Ireland.

infectious bovine rhinotracheitis (IBR) in dairy herds which commenced in March 2015. Funding is being provided by DARD through a Research Challenge Fund grant and AgriSearch in association with United Dairy Farmers and Animal Health Ireland.

An important component of the work of the DSIB is the collation and publication of surveillance findings. The fourth All-Island Animal Disease Surveillance Report (for the year 2013), prepared by DSIB and the veterinary diagnostic laboratories operated by the Department of Agriculture, Food and the Marine (DAFM) in Ireland, was published in November 2014. Publication of the report is one of the actions agreed by DARD and DAFM under the All-island Animal Health and Welfare Strategy. Quarterly animal disease surveillance reports were also compiled and published in the *Veterinary Record* journal throughout the year.

Presentations were made by DSIB staff at various conferences including at the European Veterinary Parasitology College/Irish Society for Parasitology joint meeting, the XIX congress of the National Association of Spanish Specialists in Bovine Medicine, the European Veterinary Surveillance Network meeting, the Association of Spanish Veterinary Laboratory Diagnosticians (AVEDILA) annual conference as well as at several local farmer and veterinary meetings.

AFBI continues to offer a range of commercial tests to support industry animal disease control initiatives

and in-turn the overall profitability of the NI agri-food industry. These services include AFBI's Cattle Health Scheme, which is a voluntary scheme for the control of four of the most economically important endemic diseases of cattle i.e. bovine viral diarrhoea (BVD), infectious bovine rhinotracheitis (IBR), Johne's disease, leptospirosis and neosporosis. The scheme is conducted according to the UK-wide Cattle Health Certification Standards (CHeCS) rules and the testing is accredited to ISO 17025:2005 standard. AFBI is also a designated laboratory for the testing of samples under the industry-led BVD eradication programme operated by Animal Health and Welfare Northern Ireland and carried out a large volume of PCR tests on ear-tag samples during the year.

Immunodiagnostic Branch

The Immunodiagnostic Branch provides support to DARD for a number of major statutory animal disease testing programmes including *Brucella abortus* eradication, Transmissible Spongiform Encephalopathy (TSE) surveillance plus a range of smaller serology testing programmes providing assistance with disease eradication, demonstrating ongoing disease freedom and supporting animal trade guarantees. In addition, the Branch provides industry with serology testing across a range of agricultural species.

External audit of the work of the Branch is an essential component of the quality system and increasingly important from an international trade perspective. The Branch was audited in October



Brucella testing at AFBI Stormont has been a significant factor in achieving Official Disease Free Status in Northern Ireland.



Immunodiagnosics laboratories at AFBI Stormont deal with high throughput testing for a range of diseases of farmed animals.

2014 by UKAS for ISO17025 accreditation of test methods and successfully maintained its accreditation status. In December 2014 the laboratory was inspected by auditors from the EU-RL for TSE diseases in animals. The visit was very productive and the approval of laboratory for conducting BSE and scrapie testing was granted. There was also a successful European Court of Auditors visit in October 2014 looking at a range of statutory activities for which DARD receive co-funding from Europe.

Over one million samples requiring brucellosis serology tests were processed in 2014/15. The last confirmed positive *Brucella abortus* case was in March 2012 and in March 2015, DARD were able to proceed with their application to the EU for Official Brucellosis Freedom. There were also no positives for BSE or Scrapie in 2014/15 in the on-going work of the TSE surveillance unit.

The branch co-ordinates VSD's emergency response capability for diseases such as avian influenza, Newcastle disease, bluetongue, foot-and-mouth disease, equine infectious anaemia, classical swine fever and African swine fever. This work includes co-ordinating the development and review of contingency plans and the on-going development and maintenance of capability.

IDB provides a commercial testing service and advice for a range of customers both in Northern Ireland and further afield. During the year, staff



Staff undertook porcine reproductive and respiratory syndrome (PRRS) serology testing in response to a disease outbreak.

undertook porcine reproductive and respiratory syndrome (PRRS) serology testing in response to a disease outbreak and worked closely with local veterinary practitioners to assist bringing the infection under control.

A senior member of the Branch travelled to South Africa during the year as part of a Northern Ireland Co-operation Overseas (NICO) funded visit to offer laboratory technical assistance to their *Brucella* eradication programme. Staff also attended EU Reference Laboratory meetings on brucellosis in Berlin and a transmissible spongiform encephalopathies meeting in London.

Virology Branch

The Virology Branch's remit is to improve and develop new approaches to the diagnosis and control of viral diseases in farm animals and fish, in support of DARD policy objectives aimed at improving the health and welfare of Northern Ireland livestock. The Branch undertakes a range of statutory and analytical work to support NI animal and fish disease control programmes as required by European legislation. This work includes emergency response molecular diagnostic testing for major epizootic disease threats and post-import testing in support of DARD and the agri-food sector. The Branch's research includes programmes to develop new diagnostic tests for viral infections, new approaches for development of vaccines for viral disease control and identification of novel viruses associated with existing or new disease syndromes.



Professor Louise Cosby was appointed the new Head of Virology in the year under report.

In 2014/15 the Virology Branch tested submissions for epizootic and emerging viruses including avian influenza and Newcastle Disease virus. The Branch was successful in EU proficiency testing and in renewing its 17025 accreditation for these two important avian infections. Tests for other pathogens, such as bluetongue, Schmallenberg virus, swine influenza virus, maedi-visna virus, transmissible gastroenteritis virus and porcine delta coronavirus have been conducted on behalf of DARD as part of disease freedom, trade guarantees and scanning disease surveillance. This year a molecular test was developed in house for Porcine Epidemic Diarrhoea virus which causes severe gastrointestinal disease and recently has been the cause of widespread mortalities and significant production losses in North America. The Branch also conducted a large volume of samples for pathogens as part of DARD's programme for statutory testing of fish and shellfish including oyster herpesvirus.

During the year research grant funding was obtained from the EU Marie Curie fellowship programme and InvestNI/Enterprise Ireland for investigations into emerging, evolving or novel viruses of swine in respiratory, reproductive and enteric pathologies also with relationship to nutrition. The diversity of methodologies used in the Branch is a major factor in attracting EU funding and particularly for virus discovery where conventional techniques such as tissue culture and electron microscopy are combined with state-of-the-art technologies such as next generation DNA sequencing.



Genetic sequencer in Virology laboratory at AFBI Stormont.

The Virology Branch also provides a commercial service to support local industry as well as national and international companies throughout the year. This work encompassed testing, R & D and advice on a range of virological topics. Commercial contracts have been obtained for porcine vaccine testing, studies of poultry enteric disease and a test for chicken astrovirus.

Scientific outputs during the year included publications on the serological detection of chicken astroviruses, the detection and the characterisation of novel bocavirus strains and the improved detection of bluetongue virus 8 in clinical samples as well as a number of other publications and book chapters. Presentations by staff were made at the, World Poultry Science Association conference in Chester, 8th Vaccine congress in Philadelphia, Association of Veterinary Teaching and Research Work's (AVTRW) 48th Annual Scientific Meeting, Ireland, Society for General Microbiology, Birmingham and the European Symposium of Porcine Health Management, Nantes. Virology Branch staff currently supervise three Ph.D. students. A lecture was given at the Pirbright Institute's Poultry Health Course and a presentation on astroviruses of chickens, turkeys and ducks at the Animal and Plant Health Agency's Avian Health Day at Weybridge.

Finance and Corporate Affairs Division

Introduction

AFBI's Finance and Corporate Affairs Division (FCAD) is responsible for the management of AFBI's corporate functions and supports the delivery of services by AFBI's Science Divisions. FCAD consists of:

- Governance and Performance Branch (incorporating the Secretariat and Coordination Unit)
- AFBI Innovations;
- Biometrics and Information Systems Branch;
- Emergency Planning, Health and Safety and Estates Branch;
- Finance Branch; and
- Human Resources Branch.

AFBI has a Management Statement and Financial Memorandum with DARD that describes the governance arrangements under which it operates. These take account of The Agriculture (Northern Ireland) Order 2004 as well as Managing Public Money Northern Ireland.

A Memorandum of Understanding (MoU) is in place setting out the governance arrangements for the delivery of the Assigned Work Programme for DARD. DARD commissions bi-annual reviews of the implementation and operation of the MoU during the year.

DARD and AFBI also completed implementation of the improvement actions identified following an Arm's Length Body Risk Assessment by DARD's AFBI Sponsor Branch.

More detailed information on the functions and achievements of FCAD is set out below.

Governance and Performance Branch

As a publicly funded body, AFBI operates within an increasingly complex NI public sector governance, accountability and scrutiny framework. The Board and EMT are accountable for setting clear objectives and taking decisions on expenditure and allocation of public funds. They are required to demonstrate efficiency, economy and effectiveness and prudence in the administration of public resources, to deliver value for money as well as delivering excellent and responsive services to customers and stakeholders.

FCAD through the new Governance and Performance Branch (GPB) takes the lead in supporting the Chief Executive and Accounting Officer in ensuring that good governance arrangements are in place. This includes coordinating the Institute's contact with the Board, its sub-committees and internal and external auditors.

GPB support the Board, Accounting Officer and EMT to deliver their roles effectively within this framework by providing comprehensive and robust advice on:

- governance;
- risk management;
- audit and assurance;
- information management; and
- organisational performance management.

A key priority for GPB has been to assist in the creation of a strong performance culture within AFBI where everyone understands where they fit in helping to achieve AFBI's objectives. The Branch will continue to build on this to improve the existing business planning and performance reporting process to ensure that there are clearer links down from the Corporate Plan and Objectives through the Divisional and Branch plans down to Individual performance plans.

The Secretariat and Coordination Unit provides support to the AFBI Board, its committees and the Executive Management Team. The Unit also provides support to a number of other corporate committees such as the Health and Safety Committee and the Risk Management and Business Planning Group.

AFBI Innovations

AFBI Innovations supports AFBI staff in taking new discoveries from AFBI's science base through the commercialisation process and to find markets for the Institute's new services and inventions. The scope of AFBI Innovations also includes broader marketing, events and customer engagement, the management of the DARD-Assigned Work Programme and DARD Research Programme, the provision of legal support for licensing and contract management and the provision of support to AFBI staff in sourcing and securing research funding.

Key Services and Expertise

Business Development and Intellectual Property Exploitation.

Supporting scientists to commercialise novel technologies and services through the development of Branch Business Development Plans and support for the commercialisation of specific inventions. AFBI Innovations seeks strategic partners and funding to bring new technologies to market. The unit works with staff to secure new business locally and internationally, with a focus on the North American market.

Corporate Marketing and Communications.

This involves marketing and brand, event and media management including production of corporate promotional and scientific material and displays to promote AFBI's activities and projects.

DARD and Key Public Sector Customer Management.

DARD is managed as a priority customer through the DARD Business Manager. The DARD Business Manager coordinates the annual specification of services to be delivered to DARD under the Assigned Work Programme and monitors the delivery of services. The DARD Business Manager also works closely with DARD in managing the commissioning and oversight of the DARD Research Programme including the monitoring of the DARD E&I reporting cycle. The delivery of services to other key public sector customers is also supported through the management of Service Level Agreements/MoUs.



Speakers at AFBI's Open Meeting in 2014 at Hillsborough. L-R Dr Annika Clements, Prof Glenn Kennedy, Dr John Bailey, Dr Conrad Ferris, Dr David McCleery, Dr Francis Lively and Dr Adrian Allen.



The AFBI stand at the 2014 Balmoral Show, promoting the importance of improving grassland productivity.



Prof Seamus Kennedy, AFBI CEO and Mr Colm McKenna, AFBI Board Chair, demonstrating good quality silage at the Winter Fair 2014 with Dr Mari Speijers and Dr Peter Purcell of AFBI Hillsborough.



Joel Ferguson, Prof Seamus Kennedy, (AFBI CEO), Reno Pontarollo (CEO Genome Prairie, Canada), Dr Sinclair Mayne and Dr Stanley McDowell during the AFBI-led Transatlantic Scientific Forum.



The 2014 AFBI-led Transatlantic Scientific Forum was held in Belfast at the Assembly Rooms from the 11th-13th November.

Licensing and Contract Management.

AFBI Innovations supports scientists by identifying commercialisation partners and negotiating and agreeing commercial agreements and contracts. The unit also provides support in managing and protecting Intellectual Property.

AFBI's Research Support Office.

The Research Support Office assists staff in seeking research funding from external sources. A key priority for 2014/15 was the first calls under the EU's Horizon 2020 Programme. This runs for seven years to 2020 with an estimated budget of €78 billion for research and innovation across Europe. The Northern Ireland Contact Point (NICP) for agri-food under Horizon 2020 is funded by DARD and based within AFBI, but works across Northern Ireland with both the private sector and researchers. Following meetings with individual staff and groups of researchers in collaboration with local companies, a strategy for increased engagement, targeting specific call topics, has been formulated to raise AFBI's profile and increase participation in high-quality proposals of relevance to the NI Agri-Food Sector. Increased efforts have also been made to identify and tender for other funding sources from both state and private sectors.

Key Customers / Sectors

AFBI Innovations is the "portal" for communication internally and externally, providing staff with a

contact point for accessing commercialisation support and providing potential clients with an initial gateway into AFBI.

Key Achievements in 2014-2015 Year

AFBI led, Four-Nation, Transatlantic Scientific Forum AFBI continued to initiate and build collaborations across the USA and Canada, strengthening relationships with both government and private sector bodies, resulting in the second AFBI-led Transatlantic Scientific Forum on Agri-food Research in November 2014, this time hosted by AFBI in Belfast. This forum is now establishing itself as an annual event on both sides of the Atlantic and provides a cost effective platform for knowledge sharing, agreeing mutual regional priorities and, by means of a series of intensive thematic workshops over 2 days, agreeing specific topics for international collaborations which are both capable of attracting jurisdictional funding and capable of delivering measurable outputs of genuine benefit to each region.

Internal Communications

AFBI continued to strengthen its Internal Communications with a range of initiatives. Monthly newsletters and Team Brief exercises have ensured that staff within AFBI are kept informed of key developments as the year progresses and have an opportunity to raise questions to EMT.



AFBI scientists upgrading oceanographic and meteorological monitoring systems in Belfast Lough to support an INTERREG funded counter pollution modelling project. Biometrics and Information Systems Branch supported this development and enabled the implementation of these systems within our web infrastructure to provide an emergency response service available for specialists outside of AFBI.

Biometrics & Information Systems Branch (BIS)

As a branch within Finance and Corporate Affairs Division, BIS provides an integrated statistical and IT service in support of AFBI business areas and external customers, co-ordination of AFBI quality assurance, and information management.

Key Services and Expertise

BIS Statistics Unit provides statistical services including the design of experiments and surveys in relation to DARD research projects and external research contracts, and the analysis, interpretation and reporting of scientific data. It also co-ordinates and maintains the AFBI ISO9001 quality management system and provides internal training in Microsoft Office and data analysis.

BIS Information Systems Unit develops interactive scientific applications for DARD and the agri-food industry; develops solutions for the efficient and secure management of AFBI scientific and business data; manages AFBI's intranet and internet sites; co-ordinates AFBI information management requirements including Freedom of Information (FOI) requests; maintains compliance with public sector data security and access requirements, accreditation of the AFBI IT infrastructure to NICS standards and backup, and resilience for AFBI line-of-business IT systems.

Key Achievements in 2014-2015 Year

During the year BIS developed a pollution monitoring web service for an EU funded aquatics project on pollution modelling in Belfast Lough, continued to create and update various aquatics databases aligned with the EU Data Collection Framework, commenced updating Farm Nutrient Management Calculators to align with new EU Nitrates Directive and NI legislation, and supported and enhanced the online database underpinning the industry-led program for eradication of bovine virus diarrhoea (BVD) virus from the cattle population.

BIS provided direct support to DARD by completing a verification check on the Department's Land Parcel Identification System to insure compliance with the EU's regulatory requirements; supported the online carcass investigation analysis system for the pig industry; launched a utility for upload of analysis of DARD farm business survey data to EU portal; continued work on a facility to upload farm survey data to online greenhouse gas calculators to view carbon footprint trends within the dairy and beef sectors; supported the operation of Food Standards Agency surveillance software in AFBI's laboratories for DARD Agri-food Inspection Branch; supported DARD's farm business, pesticide usage and forest inventory surveys; and provided statistics consultancy to DARD's Veterinary Service.



The Manor House at AFBI Loughgall

In addition BIS supported essential AFBI corporate functions including renewal of AFBI IT Infrastructure accreditation and ISO9001 certification; development of a new approvals system for commercial work, extended provision of Skype kiosks for researchers to aid collaboration; assisted with the development of online questionnaires and surveys and analysis of results; and enhanced the AFBI Bids & Income System budgeting tool to integrate with AFBI's Strategic Cost Model.

Emergency Planning, Safety & Estate Branch

The remit of the AFBI Emergency Planning, Safety & Estate Branch, a business unit of the Finance & Corporate Services Division is to deliver:

- an emergency planning capability for the Institute including Business Continuity Management and Incident Management with an overarching input to delivery of the Emergency Response Capability (ERC) required of AFBI by DARD and other government departments/bodies;
- estate and property management services for the AFBI Estate across six sites; and
- Health and Safety advice.

The key customers of the Branch are the individual AFBI business units and associated administrative and scientific staff. In taking forward current responsibilities, the Branch works in close association with a range of stakeholders such as the Department of Agriculture and Rural Development Estate Branch and Financial Planning, Department of Finance and Personnel (Central Procurement Directorate / Properties Division), Health and Safety Executive for Northern Ireland, and the Northern Ireland Fire & Rescue Service.

Key Achievements in 2014-15

During 2014/15 a wide range of maintenance works were carried out across the AFBI occupied estate through the annual planned preventative maintenance programme, associated remedial works, reactive maintenance, capital and minor works projects. To name but a few, examples of capital works and minor projects included the re-roofing of AFBI-Hillsborough dry sow accommodation, dairy byres and grass silos; refurbishment of two houses at Red-Row, AFBI-Hillsborough; remedial works to the AFBI-Stormont Lamont Building; improvements to site security at AFBI-Hillsborough in the form of new security gates and barriers; refurbishment of the main entrance and gates at Manor Drive, AFBI-Loughgall under NIEA Historic Estate Protocol; and installation of Uninterruptible Power Supply (UPS) in AFBI-Stormont Contingency Facility.

The overall expenditure by DARD Estate Branch on the AFBI occupied estate for 2014/15 was £2,118k with further maintenance expenditure by the AFBI Estate Unit of around £550k

As part of the AFBI Estate Strategy already noted under Sustainability, the AFBI Estate Unit has assisted DARD in taking forward the development of a number of business cases pertaining to the provision of AFBI with a rationalised, fit-for-purpose estate going forward into the future. These have included the cases for a new main building at AFBI-Stormont Veterinary Sciences Division and relocation of current business functions at AFBI-Newforge Lane from the current site to a smaller footprint at a more suitable location. During the reporting year space utilisation surveys were

undertaken for the current accommodation at the AFBI-Newforge and Stormont sites and this facilitated by the Strategic Investment Board (SIB) and DARD Estate Branch. The results from these exercises have provided an indication as to the space required for new facilities subject to business case approval and availability of capital funding. Capital funding for Containment Level 2 (CL2) animal accommodation at the AFBI-Stormont site has been obtained and AFBI will be working in conjunction with CPD to take this project forward during 2015/16 and 2016/17. Work has also commenced in development of a Master Plan for the AFBI-Hillsborough site particularly with regard to farm research accommodation which is currently of an ageing nature and needs to be brought up to modern standards.

Emergency Planning: AFBI's emergency response capability (ERC) plans were reviewed and updated by the respective scientific business and additional plans were put in place. The 19 ERC contingency plans detail how AFBI will respond to external emergencies on serious pests & plant health diseases, exotic pests and diseases on honey bees, epizootic diseases, fish diseases, shellfish contamination incidents, fish kills in freshwater, marine pollution incidents and food and animal feed incidents for customers including DARD, the Food Standards Agency, Department of Culture, Arts and Leisure and Northern Ireland Environment Agency. Scenarios based exercises and real events were used during the reporting year to test the contingency plans including participation in an exercise of a Foot and Mouth Disease Virus (FMDV) suspect carried out in conjunction with DARD and real responses by AFBI's Fisheries & Aquatic Ecosystems to fresh water fish incidents on behalf of DCAL.

During 2014/15 AFBI scientific staff provided significant input to the 2014 DARD ERC Review. The primary objective of the review was to determine DARD's emergency response capability needs and whether AFBI, as DARD's main service provider, could respond to meet these needs. AFBI scientific staff also responded to the action points recommended by the DARD ERC Working Group from the 2013 ERC Review.



Estates unit has been taking forward the development of a business case to replace the main building at AFBI Stormont.

In relation to incident management/business continuity AFBI has continued to work with the NI Fire & Rescue Service with site familiarisation visits being undertaken and scenario based exercise undertaken at AFBI-Stormont. Such exercises enable AFBI to determine the effectiveness of incident management arrangements in place and communication with NIFRS.

Health & Safety: The AFBI Health & Safety Unit provided the Institute with advice and guidance on relevant issues throughout the year. Adverse event statistics for the Institute continue to remain low with no significant increase in accidents from 2013/14. Health & Safety training was provided largely via the AFBI e-learning Health & Safety training package.

Finance Branch

Finance Branch provides support to AFBI's Executive Management Team and the wider organisation on financial management. This includes financial planning, budgeting and accounting, strategic and business planning and financial systems.

AFBI continues to operate in an economic environment where budgets are under significant pressure and the requirement to grow sources of non Grant-in-Aid and improve efficiency increases year on year in order to enable AFBI to balance its budget and maintain the same levels of service delivery to DARD. This is increasingly difficult with the pressures on public sector finances.

Key Achievements in 2014-15

The maintenance of the high standards of financial management and corporate governance is of critical importance to the Finance and Corporate Affairs Division and its programme of continued improvement was maintained throughout the year.

During the year AFBI further developed its Strategic Cost Model which is a bespoke activity based cost model which enables AFBI to cost all of its individual activities. AFBI also developed a Medium Term Financial Plan, a Desirable Asset Register, a Business Case / Post Project Evaluation database and a procurement contract database. Finance Branch also continued the development of its asset replacement plan.

Human Resources

The Human Resource (HR) Branch provides strategic and operational support for the delivery of all personnel related functions to AFBI's Executive Management Team and its staff. AFBI's Terms and Conditions of employment follow those of the Northern Ireland Civil Service and AFBI's HR service has been structured in conjunction with the role of HRConnect.

HR Branch is made of four discrete business function sections:

- Employee Relations and Management of Attendance;
- Workforce Planning and Pay Remits;
- Learning & Development and Performance Management; and
- Equality and Equal Opportunities.

In support of these services the Branch works with a range of stakeholders including AFBI Sponsor Branch in DARD, other core departments, Principal Civil Service Pensions Scheme, HRConnect, Occupational Health Service, Health & Safety Executive NI and the Equality Commission.

Key Achievements in 2014/15

Career Development: AFBI continues to promote opportunities for career development internally and during the course of this year 31 staff achieved promotion in a wide range of disciplines and grades.

One of AFBI's strategic goals is to sustain and develop its knowledge base through attracting and investing in talented people. In support of this objective, AFBI's Learning and Development Unit provide expert advice on learning and development opportunities covering the diverse range of skills required across the organisation. This Unit also administers AFBI's Assistance to Study programme which has provided support for 38 staff this year in their pursuit of professional qualifications specific to AFBI's business.

Recruitment: AFBI continues to develop its workforce in line with business aims. This has resulted in a total of 38 new appointments this year, covering various grades across the scientific, administrative and industrial disciplines.

Work Experience: AFBI continues to promote work experience opportunities for students at all levels to assist them in developing the key skills required to be successful in today's working environment. Twelve students in higher education were given the opportunity to develop key work-related skills through a relevant, supervised work placement programme. Work experience was also given to 90 students covering a range of areas within AFBI.

Sickness absence: AFBI was unsuccessful in achieving their operational objective of an average of 7.5 working days lost per staff member however, compared to DARD and the NICS overall AFBI were one of the better performers for 2014/15 by achieving 8.5 working days lost per staff member.

Equality: In accordance with its statutory duties, AFBI submitted its annual Fair Employment Monitoring Return and the Section 75/Section 49a Annual Progress Report to the Equality Commission (ECNI). AFBI's second Article 55 Review was submitted to the ECNI. The status and progress of AFBI's Equality Scheme was monitored bi-annually by the AFBI Board. An audit of AFBI's Equality Unit was completed and achieved an assurance rating of Satisfactory.

AFBI's draft Audit of Inequalities & Action Plan was developed and put out for consultation. Equality & Diversity Awareness Training was developed for delivery to all staff as a mandatory requirement, and staff are kept aware of equality issues through communications and updates posted to the AFBI intranet.

REMUNERATION REPORT



Chairman and Board Members

The Chairman is appointed for a fixed period of three years, the Deputy Chair for three years and the Board members are appointed for a fixed period of three or four years. Thereafter they are re-appointed in accordance with the Code of Practice.

The remuneration of the Board is set by DARD. Increases are calculated in line with the recommendations of the Senior Salaries Review Body. There are no arrangements in place for the payment of a bonus. Neither the Chairman nor any Board Member receives pension contribution from AFBI or DARD.

AFBI reimburses the Chairman and Board members for any incidental expenses incurred for carrying out their duties relevant to the organisation.

Details of remuneration of the Chairman and Board Members (Audited)

In 2014/2015, the remuneration of members of the Board was –

Board Member	2014/15				2013/14			
	Salary (to nearest £1,000)	Benefits in kind (to nearest £100)	Pension Benefits (to nearest £1,000)	Total (to nearest £1,000)	Salary (to nearest £1,000)	Benefits in kind (to the nearest £100)	Pension Benefits (to nearest £1,000)	Total (to nearest £1,000)
Mr Seán Hogan, Chairman *	0-5	-	-	0-5	20-25	-	-	20-25
Mr Colm McKenna, Chairman	25-30	-	-	25-30	-	-	-	-
Prof William McKelvey	10-15	-	-	10-15	10-15	-	-	10-15
Mr Trevor Hinds*	0-5	-	-	0-5	0-5	-	-	0-5
Mr Seamus McCaffrey*	0-5	-	-	0-5	0-5	-	-	0-5
Mr Alan McKeown*	0-5	-	-	0-5	0-5	-	-	0-5
Mrs Hilda Stewart**	5-10	-	-	5-10	0-5	-	-	0-5
Mr Bob McCann	5-10	-	-	5-10	5-10	-	-	5-10
Mrs Hilary McCartan	5-10	-	-	5-10	0-5	-	-	0-5
Prof Patrick Murphy	5-10	-	-	5-10	0-5	-	-	0-5
Dr Cecil McMurray	0-5	-	-	0-5	0-5	-	-	0-5
Mrs Sarah Havlin	5-10	-	-	5-10	5-10	-	-	5-10
Mr David Lindsay	0-5	-	-	0-5	0-5	-	-	0-5
Mr Ken Millar	5-10	-	-	5-10	0-5	-	-	0-5

The figures quoted above relate to payments made in 2013/14 & 2014/15. A business case was submitted to DARD in relation to additional payments of £14,868 (2012/13) and £939 (2013/14). The business case was approved on 17 May 2014 and the payments made during 2014/15. These payments are included in the 2014/15 figures above.

*Although not Board members in 2014/15 these ex-members' salary arrears were paid in 2014/15. Mr Seán Hogan completed his term of office on 31 March 2014. Mr Colm McKenna was appointed as Chairman on 14 April 2014.

Mr Alan McKeown resigned from his term of office on 28 August 2013. His position on the Board was not replaced.

Mr Trevor Hinds and Mr Seamus McCaffrey completed their term of office on 31 March 2014. Their positions were not replaced during 2014/15.

**Mrs Hilda Stewart completed her term of office on 31 March 2015.

Sub-committees of the Board

The following sub-committees continued to operate during the year and members received the noted remuneration for sitting on these committees (included within total remuneration disclosed in the table above):

Audit & Risk Assurance Committee

Mr Bob McCann, Chair	£1,377
Prof Patrick Murphy	£1,377
Mrs Sarah Havlin	£1,064

The Audit & Risk Assurance Committee advises the Board on the issues of risk, control and governance. The Accounting Officer, Director of Finance & Corporate Affairs, Head of Finance, representatives from internal and external audit and DARD's AFBI Sponsor Branch were generally in attendance at Audit Committee meetings.

Organisational Development & HR Committee

Prof. William McKelvey, Chair*	-
Prof. Patrick Murphy	£626
Mr Ken Millar	£626

* Prof William McKelvey, Deputy Chair of AFBI Board does not receive any remuneration for chairing the meetings of the Organisational Development & HR Committee.

The Organisational Development & HR Committee advises the Board on the remuneration of Executive Management Team (EMT). The members of EMT are equivalent senior civil servants for the purposes of remuneration which is set by the Minister for Finance and Personnel. No bonus scheme was available in 2014/15. Whilst the terms and conditions of employment and remuneration of all AFBI employees are in accordance with the overall terms and conditions of the NICS, any proposed changes to the overall framework are also subject to review and scrutiny by this Committee. The Accounting Officer and the Director of Finance & Corporate Affairs generally attended the Organisational Development & HR Committee meetings.

Science Strategy Committee

Mr David Lindsay, Chair £626

Dr Cecil McMurray £626

The Science Strategy Committee guides the Executive in developing a Science Strategy for AFBI. This includes assisting EMT to prioritise existing areas of scientific work and identify strategic scientific areas or technologies in which AFBI should potentially become engaged.

Finance Sub Committee

Mrs Hilary McCartan, Chair £939

Mrs Hilda Stewart £939

Mr Ken Millar £939

The Finance Committee supports the Board in discharging its responsibilities for the oversight of financial management including, in particular, the review of financial plans and budget monitoring. The Accounting Officer, Director of Finance & Corporate Affairs and Head of Finance were generally in attendance.

Chief Executive and Executive Management Team

Remuneration Policy

The remuneration of senior civil servants is set by the Minister for Finance and Personnel. The Minister approved a restructured SCS pay settlement broadly in line with the Senior Salaries Review Board report which he commissioned in 2010. The commitment to a Pay and Grading Review for SCS was the second phase of the equal pay settlement approved by the Executive.

Service contracts

Appointments in AFBI are made in accordance with the Civil Service Commissioners' Recruitment code which requires appointments to be made on merit on the basis of fair and open competition but also includes the circumstances when appointments may otherwise be made.

Unless otherwise stated below, the officials covered by this report hold appointments which are open-ended. Early termination, other than for misconduct, would result in the individual receiving compensation as set out in the Civil Service Compensation Scheme.

Further information about the work of the Civil Service Commissioners can be found at www.nicscommissioners.org

Salary and Pension Entitlements

The following sections provide details of the remuneration and pension interests of the Executive Management Team of AFBI.

Remuneration (including salary) and pension entitlements (Audited)

Name	2014/15				2013/14			
	Salary (to nearest £1,000)	Benefits in kind (to nearest £100)	Pension Benefits **(to nearest £1,000)	Total (to nearest £1,000)	Salary (to nearest £1,000)	Benefits in kind (to the nearest £100)	Pension Benefits** (to nearest £1,000)	Total (to nearest £1,000)
Prof S Kennedy, CEO	85 - 90	-	29	115 - 120	80 - 85	-	31	110 - 115
Dr S Mayne, DCEO	70 - 75	-	35	105 - 110	65 - 70	-	0	65 - 70
Dr S McDowell, DCEO	65 - 70	-	19	80 - 85	60 - 65	-	22	85 - 90
Mrs L Hogg, DCEO	65 - 70	-	25	90 - 95	60 - 65	-	24	85 - 90
Band of Highest Paid Director's Total Remuneration	85 - 90				80 - 85			
Median Total Remuneration	26,711				26,147			
Ratio***	3.28				3.16			

**The value of pension benefits accrued during the year is calculated as (the real increase in pension multiplied by 20) plus (the real increase in any lump sum) less (the contributions made by the individual).

The real increases include increases due to inflation and any increase or decrease due to a transfer of pension rights.

***The banded remuneration of the highest paid director in AFBI in the financial year 2014/15 was £85-90k (2013/14, £80-85k). This was 3.28 times (2013/14, 3.16) the median remuneration of the workforce, which was £26,711 (2013/14, £26,147). In 2014/15, no employees (2013/14, 3) received remuneration in excess of the highest-paid director. Remuneration ranged from £0.3k to £88k (2013/14, £1k to £99k).

Total remuneration includes salary, non-consolidated performance-related pay and benefits-in-kind. It does not include severance payments, employer pension contributions and the cash equivalent transfer value of pensions.

Off-Payroll Payments:

Details of off-payroll payments at a cost of over £58,200 per annum	
Opening number of off-payroll engagements at 1 April 2014	1
Number of new engagements during 2014/15	2
Number of engagements coming onto AFBI payroll during 2014/15	0
Number of engagements that have come to an end during 2014/15	1
Closing number of engagements at 31 March 2015	2

Details of off-payroll engagements as of 31 March 2015, for more than £220 per day and that last longer than six months	
Number of existing engagements as of 31 March 2015	1
Of which...	
Number that have existed for less than one year at time of reporting	1

The off-payroll engagement outlined above has been subject to a risk based assessment as to whether assurance is required that the individual is paying the right amount of tax. It was not deemed necessary that assurance was sought.

Details of new off-payroll engagements between 1 April 2014 and 31 March 2015, for more than £220 per day and that last longer than six months	
Number of new engagements between 1 April 2014 and 31 March 2015	1
Number of the above which include contractual clauses giving AFBI the right to request assurance in relation to income tax and National Insurance obligations	0
Number for whom assurance has been requested	N/A

Salary:

Salary includes gross salary, overtime and any other allowance to the extent that it is subject to UK taxation and any *gratia* payments.

Benefits in kind:

The monetary value of benefits in kind covers any benefits provided by the employer and treated by HM Revenue and Customs as a taxable emolument.

Pension Entitlements (Audited):

Name	Accrued pension at pension age as at 31/3/15 and related lump sum	Real increase in pension and related lump sum at pension age	CETV at 31/3/15	CETV at 31/3/14	Real increase in CETV	Employer contribution to partnership pension account
	£'000	£'000	£'000	£'000	£'000	Nearest £100
Prof S Kennedy	35-40 plus lump sum 110-115	0-2.5 plus lump sum 2.5-5	841	774	28	-
Dr S Mayne	30-35 plus lump sum 100-105	0-2.5 plus lump sum 5-7.5	705	636	32	-
Dr S McDowell	25-30 plus lump sum 30-35	0-2.5 plus lump sum 0-2.5	410	375	13	-
Mrs L Hogg	0-5	0-2.5	34	17	10	-

Northern Ireland Civil Service (NICS) Pension Arrangements

Pension benefits are provided through the Northern Ireland Civil Service pension arrangements which are administered by Civil Service Pensions (CSP). Staff in post prior to 30 July 2007 may be in one of three statutory based 'final salary' defined benefit arrangements (classic, premium, and classic plus). These arrangements are unfunded with the cost of benefits met by monies voted by the Assembly each year. From April 2011 pensions payable under classic, premium, and classic plus are increased annually in line with changes in the Consumer Prices Index (CPI). Prior to 2011, pensions were increased in line with changes in the Retail Prices Index (RPI). New entrants joining on or after 1 October 2002 and before 30 July 2007 could choose between membership of premium or joining a good quality 'money purchase' stakeholder arrangement with a significant employer contribution (partnership pension account). New entrants joining on or after 30 July 2007 are eligible for membership of the Nuvos arrangement or they can opt for a partnership pension account. Nuvos is a 'Career Average Revalued Earnings' (CARE) arrangement in which members accrue pension benefits at a percentage rate of annual pensionable earnings throughout the period of scheme membership. The current rate is 2.3%. CARE pension benefits are increased annually in line with increases in the CPI.

A new pension scheme, Alpha, will be introduced for new entrants from 1 April 2015. The majority of existing members of the NICS pension arrangements will move to alpha from that date. Members who on 1 April 2012 were within 10 years of their normal pension age will not move to Alpha and those who were within 13.5 years and 10 years of their normal pension age were given a choice between moving to Alpha on 1 April 2015 or at a later date determined by their age. Alpha is also a 'Career Average Revalued

Earnings' (CARE) arrangement in which members accrue pension benefits at a percentage rate of annual pensionable earnings throughout the period of scheme membership. The rate will be 2.32%. CARE pension benefits are increased annually in line with increases in the CPI.

For 2015, public service pensions will be increased by 1.2% for pensions which began before 6 April 2014. Pensions which began after 6 April 2014 will be increased proportionately.

Employee contribution rates for all members for the period covering 1 April 2015 – 31 March 2016 are as follows:

Scheme Year 1 April 2015 to 31 March 2016

Pay band – assessed each pay period		Contribution rates – Classic members	Contribution rates – Classic plus, Premium, Nuvos and Alpha
From	To	From 01 April 2015 to 31 March 2016	From 01 April 2015 to 31 March 2016
£0	£15,000.99	3%	4.6%
£15,001	£21,000.99	4.6%	4.6%
£21,001	£47,000.99	5.45%	5.45%
£47,001	£150,000.99	7.35%	7.35%
£150,001 and above		8.05%	8.05%

Benefits in Classic accrue at the rate of 1/80th of pensionable salary for each year of service. In addition, a lump sum equivalent to three years' pension is payable on retirement. For premium, benefits accrue at the rate of 1/60th of final pensionable earnings for each year of service. Unlike Classic, there is no automatic lump sum (but members may give up (commute) some of their pension to provide a lump sum). Classic plus is essentially a variation of premium, but with benefits in respect of service before 1 October 2002 calculated broadly as per Classic.

The accrued pension quoted is the pension the member is entitled to receive when they reach pension age, or immediately on ceasing to be an active member of the scheme if they are at or over pension age. Pension age is 60 for members of Classic, Premium, and Classic Plus and 65 for members of Nuvos. The normal pension age in Alpha will be linked to the member's State Pension Age but cannot be before age 65. Further details about the NICS pension arrangements can be found at the website www.dfpni.gov.uk/civilservicepensions-ni.

Cash Equivalent Transfer Values

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their

total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures, and from 2003/04 the other pension details, include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the NICS pension arrangements. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated in accordance with The Occupational Pension Schemes (Transfer Values) (Amendment) Regulations and do not take account of any actual or potential benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are taken.

Real increase in CETV

This reflects the increase in CETV effectively funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

Compensation for Loss of Office

No compensation has been paid to senior officers by AFBI during the year for loss of office.

AFBI's accounting policy in respect of pensions is at Note 1 to the accounts.



Professor Seamus Kennedy
MVB PhD MRCVS FRCPATH
Chief Executive and Accounting Officer

Date: 30th November 2015

Statement of Accounting Officer's Responsibilities

Under the Agriculture (Northern Ireland) Order 2004, the Institute is required to prepare for each financial year, a statement of accounts in the form and of the basis set out in the Accounts Direction.

The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Institute, its income and expenditure, changes in taxpayers' equity and cash flows for the financial year.

DARD has appointed the Chief Executive Officer of the Institute as Accounting Officer of the Institute, with responsibility for preparing the Institute's accounts and for transmitting them to the Comptroller and Auditor General.

In preparing the accounts, the Accounting Officer is required to comply with the Government Financial Reporting Manual and in particular to:

- a) observe the Accounts Direction issued by DARD, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- b) make judgments and estimates on a suitable basis;
- c) state whether applicable accounting standards, as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the accounts; and
- d) prepare the accounts on a going concern basis.

The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which he is answerable, for keeping proper records and for guarding the Institute's assets, are set out in the Accounting Officer's memorandum issued by DFP and published in *Managing Public Money Northern Ireland*.

2014/15 GOVERNANCE STATEMENT

INTRODUCTION

I am pleased to introduce the Governance Statement for the year ended 31 March 2015.

This has been produced in line with guidance issued by the Department of Finance and Personnel (DFP) in Dear Accounting Officer letter DAO 10/12 and Annex A.3.1 of Managing Public Money Northern Ireland (MPMNI).

1. SCOPE AND RESPONSIBILITY

AFBI was established on 1 April 2006 under the Agriculture (Northern Ireland) Order 2004 as a Non-Departmental Public Body (NDPB) of the Department of Agriculture and Rural Development (DARD) and brought together the former DARD Science Service and the Agricultural Research Institute of Northern Ireland.

As Accounting Officer I am responsible for managing and controlling the resources used in AFBI, in accordance with the responsibilities assigned to me in Managing Public Money Northern Ireland (MPMNI). The Governance Statement sets out the governance, risk management and internal control arrangements that operated in AFBI during the financial year to assist me in discharging this stewardship role.

The governance structures and processes, risk management and internal controls during the year were effective. During the year there was a continued focus on strengthening governance arrangements and internal controls through the implementation of recommendations resulting from an independent strategic business review of AFBI which concluded in March 2012, internal and external audit recommendations and improvement actions identified following an Arm's Length Body Risk Assessment carried out by DARD.

The Northern Ireland Audit Office (NIAO) published a report into AFBI in September 2013 and the Public Accounts Committee (PAC) published a report into AFBI in March 2014. These included recommendations in the areas of efficiency, unit costs, benchmarking, costing and charging and Research & Development project management. A Memorandum of Reply to the Public Accounts Committee report was laid in the Assembly by the DFP Minister in May 2014. Implementation of the recommendations has been an area of focus for 2014/15 and significant progress has been made by the Institute in this respect.

DARD, with input from AFBI, provided a comprehensive update on the status of implementation of the recommendations to NIAO in April 2015 and to the PAC in June 2015.

2. GOVERNANCE ARRANGEMENTS

Governance Framework

AFBI's governance framework sets out the roles, responsibilities and procedures for the effective and efficient conduct of the organisation's business. AFBI is committed to governance excellence and to be accountable and transparent for its decisions and activities. Appendix A to the Governance Statement illustrates AFBI's Governance and Risk Assurance Framework.

Governance Structure

The DARD Minister is responsible and answerable to the Northern Ireland Assembly (the Assembly) for the exercise of the powers on which the administration of the Department depends. The DARD Minister has a duty to the Assembly to account, and be held to account, for the policies, decisions and actions of the Department including AFBI as one of its NDPBs.

While in practice NDPBs operate with some independence and are not under day-to-day ministerial control, ministers are nevertheless ultimately accountable to the Assembly for NDPBs' activities and performance. This is because they are responsible for NDPBs' founding legislation; have influence over NDPBs' strategic direction; appoint their boards; and have the ultimate sanction of abolition or reform subject to the Executive's approval where this requires a change in statute.

DARD's Permanent Secretary is appointed as DARD's Departmental Accounting Officer by the Department of Finance and Personnel. AFBI Sponsor Branch is a part of the DARD's Policy and Economics Division and is responsible for managing the overall relationship between DARD and AFBI. AFBI Sponsor Branch holds monthly Finance and Governance meetings and quarterly Accountability Meetings with AFBI as part of its governance oversight.

DARD's Departmental Accounting Officer in turn has designated me as the Accounting Officer for AFBI. As Accounting Officer I am personally responsible for safeguarding the public funds for which I have charge; for ensuring propriety and regularity in the handling of those public funds; and for the day-to-day operations and management of AFBI.

In fulfilling my duties as AFBI's Accounting Officer I was supported by my Executive Management Team (EMT) and a Board. The Executive Management Team consists of the Directors of the Sustainable Agri-Food Sciences Division, the Veterinary Sciences Division and the Finance and Corporate Affairs Division.

The Board

AFBI's Board consists of 10 Non-Executive Members appointed by the DARD Minister. Appointments are made in line with the Code of Practice issued by the Commissioner for Public Appointments Northern Ireland. The main responsibilities of the Board are to ensure that AFBI fulfils the aims and objectives set by DARD and approved by the DARD Minister; monitoring AFBI's compliance with applicable law and policy; and for promoting the efficient, economic and effective use of staff and other resources by AFBI. The Board fulfils its responsibilities by establishing the overall strategic direction of AFBI and by challenging the Executive Team in business planning, target setting and delivery of performance against agreed targets.

The Board operates within AFBI's Board Operating Framework which sets out the broad governance structures within which the Board will operate. It defines the key roles and responsibilities which underpin the relationship between AFBI and DARD.

Board Sub-Committees

While all decision-making powers are reserved to the Board, four sub-committees operated in an advisory capacity in line with their Terms of Reference. Details of these are set out below.

i The Audit and Risk Assurance Committee (ARAC) advises the Board on issues of governance risk and control. The ARAC review the interim and final accounts to provide the Board with the assurance that it could authorise me to sign the accounts on their behalf;

ii The Finance Committee supports the Board in discharging its responsibilities for oversight of financial management including the review of financial plans and budget monitoring. The Finance Committee review the interim and final accounts, prior to submission to the ARAC;

iii The Organisational Development & Human Resources Sub-Committee advises the Board on organisational development and human resources matters within AFBI, and supports the Board's programme of Change Management; and

iv The Science Strategy Committee assisted the Executive in the development and oversight of the implementation of a Science Strategy for AFBI. This includes the identification of a range of key scientific skills and technologies which AFBI should maintain and develop.

Board/Sub Committee Attendance

The attendance of members at Board and Sub-Committee meetings during the year is summarised as follows:

AFBI Board	Board Attendance	Audit & Risk Assurance Committee Attendance	Finance Committee Attendance	Organisational Development & Human Resources Sub-Committee Attendance	Science Strategy Committee Attendance
Mr Colm McKenna ¹ (Chair)	11/11				
Prof Bill McKelvey (Deputy Chair)	10/12			3/3	
Mrs Sarah Havlin	8/12	4/5			
Mr David Lindsay	11/12				2/2
Mr Bob McCann	11/12	5/5			
Mrs Hilary McCartan	12/12		3/3		
Dr Cecil McMurray	12/12				2/2
Mr Ken Millar	11/12		3/3	3/3	
Prof Patrick Murphy	11/12	5/5		3/3	
Mrs Hilda Stewart	9/12		3/3		

(Footnotes)

¹ Mr Colm McKenna was appointed from 14 April 2014 and therefore did not attend the Board Meeting on 3rd April 2014

Board Performance

AFBI's Board reviewed its performance and undertook a self assessment effectiveness review for 2014/15. The review focussed on a number of key governance principles:

1. purpose and outcomes;
2. roles and responsibilities;
3. values and governance;
4. decision making and risk management;
5. Board capacity and structure; and
6. stakeholder accountability and communication.

The Board reaffirmed that its role was to set the strategic direction of the organisation, provide constructive challenge, ensure robust governance, hold the EMT to account, set the tone of the organisation, ensure that relations with stakeholders are managed effectively and that it was answerable to the DARD Minister. The review indicated that the Board considered that it was operating effectively.

The review demonstrated that the Board has a clear understanding of its role and strategic priorities and that it promoted high standards of governance, risk and financial management and a culture of performance and delivery. It did however highlight the need to further develop and improve relationships with the Sponsor Department DARD and to continue to strengthen relationships with stakeholders.

Quality of Information used by the Board

The quality of information provided to the Board and Executive is of a high standard and financial, whistleblowing and risk register reports are provided on a regular basis. The Board is satisfied with the format, content and quality of the information it has received and this was confirmed in the Board Self Assessment exercise completed for 2014/15.

Compliance with 'Corporate Governance Code'

As the Accounting Officer of a Non-Departmental Public Body of a Northern Ireland department, in line with DAO (DFP) 06/13 I can confirm that AFBI as an Arm's Length Body of DARD complies with all relevant aspects of the "Corporate governance in central government departments: Code of good practice NI" published by DFP in 2013.

Conflicts of Interest

On appointment, Board Members are required to provide a list of all interests which might give rise to a conflict of interest. At every Board and sub-committee meeting a standing agenda item on declarations of interest is included and brought to the attention of the members by the Chair. Board papers are not circulated to members who have declared or are deemed to have a specific conflict of interest. Where a conflict of interest is declared, it is recorded and the relevant member(s) leave the Board meetings for the specific agenda item.

In the PAC report into AFBI published in March 2014, PAC highlighted its concern that AFBI employees had received a share of AFBI's royalty income. PAC did however recognise that current legislation requires an employer to provide employees with a "fair share" of commercial benefits derived from intellectual property which they have developed. PAC also acknowledged that, prior to making any payments to staff, AFBI and DARD sought two sets of professional legal advice and obtained DFP approval. PAC was aware that one claim from a member of AFBI staff remained outstanding and asked DARD to report the final outcome from this case to it. Following settlement of the claim the DARD Permanent Secretary duly informed the PAC Chair.

An ongoing conflict of interest relating to a legal claim in respect of royalty income received by AFBI, of which I was a potential beneficiary, was managed in line with AFBI's conflicts of interest procedure and in accordance with the principles regarding conflicts of interest set out in *Managing Public Money Northern Ireland*. This conflict of interest has been disclosed in the Governance Statement and Statement of Accounts in prior years. One of the Board Members was also conflicted in this matter. The legal claim² was settled during the year and the terms of settlement are confidential.

3. RISK MANAGEMENT

Risk Management Framework & Structure

AFBI has a well embedded and robust risk management and internal control framework in place with direct involvement of EMT. AFBI's Risk Management Strategy clearly sets out the roles, responsibilities, procedures and risk appetite for Risk Management within AFBI.

Risk Management is a standing agenda item for Board and Audit & Risk Assurance Committee meetings and AFBI's Risk Register is reviewed by both meetings on a quarterly basis. The Board also reviews one of the risks in detail on a cyclical basis. DARD and AFBI's internal and external auditors attend Audit & Risk Assurance Committee meetings and therefore provide a further layer of external scrutiny and challenge.

Information Risk

AFBI's approach to the management of information security risks is proportionate to the nature of the risks and the comparatively limited amount of personal or sensitive information handled by AFBI and its delivery network.

As AFBI's Senior Information Risk Owner I have received assurances from the Senior Responsible Owner (SRO) (AFBI Head of IT) that the information governance policy framework is effective and that adequate controls and measures are in place to enable AFBI's information systems to withstand threats to their confidentiality, integrity and availability, as evidenced by compliance with the NICS Code of Connection which is externally audited.

There have been no reported significant data losses in the course of the year. While there was one incident of loss of personal data during the year 2014/15 this was handled under the AFBI Data Breach Incident Plan and was assessed as a low risk incident. This resulted from administrative error and had a satisfactory outcome having been dealt with promptly with steps taken to prevent recurrence.

The SRO has based his statement on the assurances received by him from AFBI's IT Security Officer (Head of IT Infrastructure and Support) in relation to IT security accreditation and where IT legislative compliance is concerned, he has depended on AFBI's Data Protection Officer & Freedom of Information Co-ordinator.

Sponsor Branch Risk Assessment

During the 2012/13 year DARD completed a risk assessment to inform and improve its sponsorship oversight and governance of AFBI. A total of 16 improvement actions were taken forward by AFBI and DARD in 2014/15, and I can confirm that all of the actions have been completed.

² See Related Parties, Provisions, Payables notes to Accounts

New Risks Added in 2014/15

To reflect the significance of the PAC/NIAO review of AFBI, a new risk was added in 2014/15 to AFBI's Corporate Risk Register. This risk is defined as - *'If AFBI fails to implement NIAO and PAC recommendations it may negatively impact its reputational standing'*. The controls in place and additional actions to manage this risk were formally documented within the Corporate Risk Register and were monitored quarterly by the Board and Audit & Risk Assurance Committee.

4. INTERNAL CONTROLS

An important element of the risk management framework is the system of internal control. This is designed to manage AFBI's risks to a reasonable level, rather than to eliminate all risk of failure to achieve aims and objectives. It can therefore only provide reasonable and not absolute assurance of effectiveness. A system of internal control was in place throughout the year and is in accordance with guidance defined in *Managing Public Money Northern Ireland*.

Assurance Statements

I obtained additional assurance through Assurance Statements provided to me by AFBI's Directors. I in turn provide an Assurance Statement to AFBI Sponsor Branch in DARD. My Assurance Statement confirmed that the necessary internal controls were in place to provide reasonable assurance in the areas of:

1. Accountability & Governance;
2. Performance against Key Objectives & Targets;
3. Risk Management;
4. Business Planning;
5. Financial Planning & Monitoring;
6. Fraud;
7. Economic Appraisal, Post Project Evaluation & Consultancy;
8. Procurement;
9. Policy implementation;
10. Human Resources;
11. Internal & External Audit Reports; and
12. Data Management.

This assurance is subject to outstanding information governance gaps which are currently being addressed. AFBI currently do not have a corporate document management system. However, discussions are underway with Enterprise Shared Services about possible future participation in the Records NI shared service. During 2014/15 AFBI made significant progress in relation to information governance with new internal controls introduced including Data Protection training for all staff, Data Breach Management Plan, Data Sharing Guidance, and Clear Desk & Screen Policy. AFBI will continue to strengthen its information governance through the planned future participation in the Records NI shared service, completion of an Information Audit and completion of ongoing compliance checks to provide further assurance that all information is being held securely.

Financial Management

AFBI's system of internal financial control is based on a framework of financial information, financial procedures, segregation of duties and a system of delegation and accountability. These include annual budgeting, in year forecasting, corporate budget monitor reports and divisional and branch reports.

All cases of factual or suspected fraud and whistle-blowing incidents that came to my attention during the year were reported to DARD's Principal Accounting Officer, the Comptroller and Auditor General of the Northern Ireland Audit Office, AFBI's Chair and the Chair of AFBI's Audit & Risk Assurance Committee.

Key Assurance Providers

i. AFBI's Internal Audit

AFBI's Internal Audit function is carried out by a professional accounting firm which was appointed in accordance with the Public Sector Internal Audit Standards. Under the terms of the appointment, a Director in the firm acts as AFBI's Head of Internal Audit, who provides me with an independent opinion on AFBI's systems of risk management, control and governance and AFBI received an overall satisfactory level of assurance in respect of 2014/15.

The Public Sector Internal Audit Standards requires AFBI's internal auditors to bring to my attention those significant control issues which may be relevant to the preparation of my Governance Statement. As a result of the work undertaken during the year, while Internal Audit made a number of recommendations within each of their reviews which are currently being taken forward, there were no significant issues which needed to be brought to my attention (i.e. Priority 1 recommendations).

Internal Audit conducted five audits during the year, 1 of which was provided with a substantial assurance rating with the remaining 4 achieving satisfactory assurance ratings. These are summarised in the following table.

Audit	Assurance Rating
Review of Sustainable Agri-Food Science Division	Satisfactory
Review of Veterinary Science Division	Satisfactory
Review of Research and Development	Satisfactory
Review of Costing and Charging	Satisfactory
Review of Payroll, Pensions and Travel Expenses	Substantial

In addition, Internal Audit undertook a follow up review of a sample of recommendations made during the 2013/14 year in relation to a number of reviews. This showed good progress in the implementation of recommendations with all either fully or partially implemented with the exception of 1 which will be implemented in July 2015.

ii DARD Internal Audit

DARD Internal Audit provides further assurance on the adequacy of AFBI's governance, risk management, and internal control. In view of the fact that AFBI has its own Internal Audit function I requested that the DARD Internal Audit plan for 2013/14 include only a follow-up review of previous recommendations. On the basis of its review of the implementation of previous recommendations, which were confirmed as complete, DARD Internal Audit provided me with a 'Satisfactory' opinion for 2014/15.

iii. Northern Ireland Audit Office

AFBI's Annual Accounts are audited by the Northern Ireland Audit Office (NIAO). In its 'Report to Those Charged with Governance'³, the NIAO was able to issue an unqualified audit opinion. NIAO made two Priority 1 recommendations within the report, which related to a number of minor asset recording issues and in relation to income recognition. Both of these recommendations are nearing completion and will be fully implemented prior to the sign off of the 2014/15 Financial Statements

As disclosed in AFBI's Governance Statement for 2013/14, NIAO published a Value for Money review of the period since AFBI's establishment on 1 April 2006 until 31 March 2011. The report was published on 12 September 2013 and contained 11 recommendations relating to financial management, performance reporting, the management of research and development activities and governance and oversight arrangements within AFBI.

The report was examined by the Public Accounts Committee (PAC) in November 2013 and its report was published on 19 March 2014 and contained 6 recommendations. A Memorandum of Reply to the Public Accounts Committee report was laid in the Assembly by the DFP Minister in May 2014.

Implementation of the recommendations has continued to be a key area of focus throughout 2014/15. Progress is monitored through quarterly returns to DARD via AFBI Sponsor Branch, quarterly reports to the Board and Audit and Risk Assurance Committee. Progress is also discussed as a standing agenda item on the Accountability meetings between myself as AFBI's Accounting Officer and the DARD Senior Sponsor which forms part of the overall governance framework.

Significant progress has been made in implementing the elements of the recommendations for which AFBI are responsible. This progress is reflected in the 'Satisfactory' assurance opinions provided by AFBI's Internal Auditors in their reviews of Costing and Charging and Research and Development which were completed in 2014/15. These were carried out in line with one of the recommendations made by the PAC which required that DARD undertake an annual assurance review of key measures including Costing and Charging, Efficiency Measurement and Research and Development (R&D) project management in AFBI. Following agreement with DARD, 2 of these reviews were completed by AFBI's Internal Auditors who provided 'Satisfactory' assurance opinions in their reviews of Costing and Charging and R&D Project Management which were completed in 2014/15. A review of Efficiency Measurement is to be completed by AFBI's Internal Auditors in 2015/16.

iv. Enterprise Shared Services audited by DFP Internal Audit

To enable me to complete this Governance Statement, I have also drawn on assurances received from the Head of Internal Audit in the Department of Finance and Personnel (DFP) in respect of the Enterprise Shared Services that AFBI avails of. During 2014/15 DFP conducted a number of audits which are summarised in the table below along with the assurance rating received. The Head of Internal Audit in DFP has provided an overall Satisfactory opinion on ESS overall.

³ NIAO Report to those charged with governance relates to audit of 2013/14

Shared Service Utilised	No of Audits Completed	Assurance Rating
HR Connect (Human Resource management)	4	4 x Substantial
IT Assist (centralised IT services)	4	4 x Satisfactory
Central Procurement Directorate	3	2 x Satisfactory 1 x Limited

Monitoring the Implementation of Recommendations

The status of all internal and external audit recommendations along with the PAC and NIAO Value for Money review recommendations are reported to the Audit & Risk Assurance Committee on a quarterly basis to ensure that these are effectively implemented in line with the agreed implementation date.

Significant Issues

During the year AFBI worked closely with DARD to develop the Institute's 2020 Strategy. This work was carried out against a backdrop of rapidly developing severe pressures on public finances in Northern Ireland. The AFBI Board and Executive are clear that AFBI must consolidate around its key areas of scientific strength where it can deliver world class science, reduce its cost base and drive commercial income to the maximum extent possible. The Board and Executive Management Team (EMT) of AFBI acknowledge that a major reduction in the staffing, estate and overhead costs of AFBI is essential if the Institute is to be sustainable in this unprecedented financial environment.

In response AFBI introduced a series of cost reduction measures including suppression of posts, redeployment of staff to priority work areas, and cuts in overtime, travel and subsistence and the use of agency staff. Due to the announcement during the year of further major reductions in grant-in-aid for 2015-16 and beyond, AFBI developed plans for a substantial staff Voluntary Exit Scheme to take effect in 2015/16 targeting 200 leavers. This will have major implications for the scientific capacity of AFBI from late 2015 onwards.

A large component of AFBI's royalty income stream is due to end in the next few years. However AFBI is working with Queen's University Belfast to clarify and maximise the duration and quantum of this important income stream.

During the year redundancy payments totalling £15,011 were made to two employees following expiry of their fixed term contracts. The fixed term contracts were associated with external funding applications and expiry of the contracts was linked to the cessation of the external funding. The employees were entitled to redundancy payments because they had 2 or more years' service, the work that they were undertaking was ceasing and there were no suitable redeployment vacancies. As required by AFBI's Management Statement and Financial Memorandum AFBI sought DARD and DFP approval for the payments.

While DFP acknowledged that AFBI had a statutory obligation to make the payments and that it expected AFBI to make the payments, DFP did not however grant approval for the payments on the basis that it considered that the approval sought was retrospective and as such considered the payments irregular. AFBI has reviewed its remaining fixed term contracts and considers that it is unlikely that their expiry will attract redundancy payments either because the underlying post will still be required or because a suitable redeployment opportunity will become available. AFBI will however seek a mechanism with DFP to obtain approval for the payments in the event that this is not the case.

5. CONCLUSION

As Accounting Officer, based on assurances provided to me by the AFBI's Assurance providers and other than the specific control issues referred to above, I consider that the overall system of risk management, internal control and governance provides satisfactory assurance to me in relation to the ability of AFBI to effectively discharge its governance responsibilities.

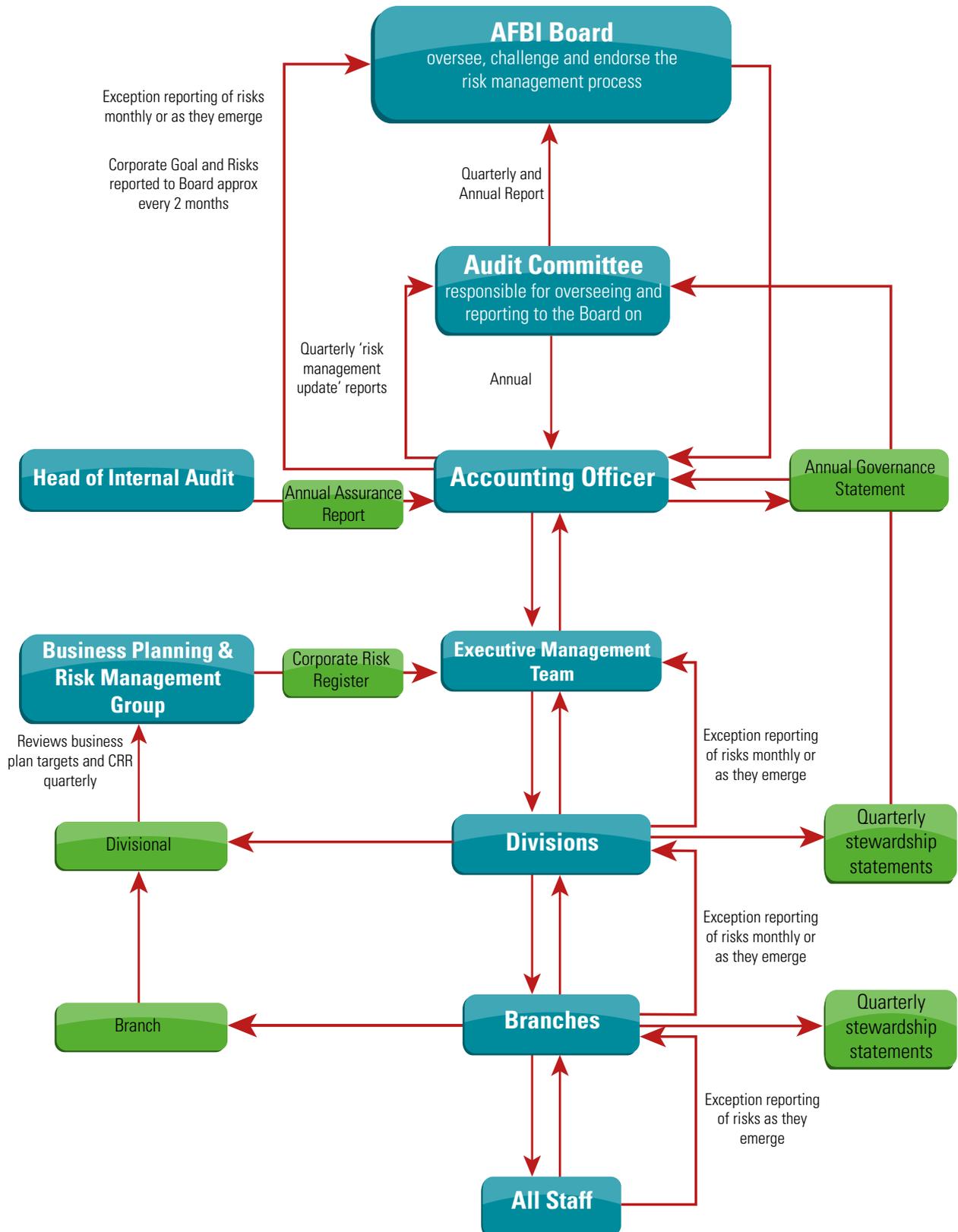


Professor Seamus Kennedy, MVB PhD MRCVS FRCPath
Chief Executive Officer

30th November 2015

Appendix A:

Governance and Risk Assurance Framework



Certificate of the Comptroller and Auditor General to the Northern Ireland Assembly

I certify that I have audited the financial statements of the Agri-Food and Biosciences Institute for the year ended 31 March 2015 under the Agriculture (Northern Ireland) Order 2004. These comprise the Statement of Comprehensive Net Expenditure, the Statement of Financial Position, the Statement of Cash Flows, the Statement of Changes in Taxpayers' Equity and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

Respective responsibilities of Accounting Officer and auditor

As explained more fully in the Statement of Accounting Officer's Responsibilities, the Accounting Officer is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to examine, certify and report on the financial statements in accordance with the Agriculture (Northern Ireland) Order 2004. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Agri-Food and Biosciences Institute's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Agri-Food and Biosciences Institute; and the overall presentation of the financial statements. In addition I read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income recorded in the financial statements have been applied to the purposes intended by the Assembly and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Opinion on Regularity

In my opinion, in all material respects the expenditure and income recorded in the financial statements have been applied to the purposes intended by the Assembly and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Opinion on financial statements

In my opinion:

- the financial statements give a true and fair view of the state of Agri-Food and Biosciences Institute's affairs as at 31 March 2015 and of the net expenditure, cash flows and changes in taxpayers' equity for the year then ended; and
- the financial statements have been properly prepared in accordance with the Agriculture (Northern Ireland) Order 2004 and the Department of Agriculture and Rural Development's directions issued thereunder.

Opinion on other matters

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with Department of Agriculture and Rural Development's directions made under the Agriculture (Northern Ireland) Order 2004; and
- the information given in the Directors' Report, the Strategic Report and the unaudited part of the Remuneration Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept; or
- the financial statements and the part of the Remuneration Report to be audited are not in agreement with the accounting records; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with Department of Finance and Personnel's guidance.

Report

I have no observations to make on these financial statements.



KJ Donnelly
Comptroller and Auditor General
Northern Ireland Audit Office
106 University Street
Belfast
BT7 1EU

8 December 2015

STATEMENT OF ACCOUNTS

AGRI-FOOD AND BIOSCIENCES INSTITUTE
FOR THE YEAR ENDED 31 MARCH 2015



Statement of Comprehensive Net Expenditure

for the year ended 31 March 2015

	Note	2014-15 £000	2013-14 £000
Expenditure			
Staff costs	3	28,932	28,697
Depreciation	4	2,731	3,247
Other Expenditures	4	25,863	25,398
		57,526	57,342
Income			
Income from Activities		(15,394)	(16,348)
EU Income		(2,588)	(2,194)
	5	(17,982)	(18,542)
Net Expenditure		39,544	38,800
Taxation Charge	4	887	(18)
Notional Charges	4	1,462	1,443
Net Expenditure after taxation and notional charges		41,893	40,225
Other Comprehensive Net Expenditure			
Items that will not be reclassified to net operating costs:			
Net (gain)/loss on revaluation of Property, Plant and Equipment	6,10	(81)	668
Net (gain) on revaluation of Intangibles	7,10	(2)	(6)
Total Comprehensive Net Expenditure for the year ended 31 March 2015		41,810	40,887

The notes on 94 pages to 115 form part of these accounts.

Statement of Financial Position

as at 31 March 2015

	Note	2015		2014	
		£000	£000	£000	£000
Non-current assets:					
Property, plant and equipment	6	9,255		9,512	
Intangible assets	7	435		213	
Biological assets	8	1,306		1,399	
Total non-current assets			10,996		11,124
Current assets:					
Inventories	11	502		394	
Trade and other receivables	12	8,182		8,471	
Cash and cash equivalents	13	3,035		2,726	
Total current assets			11,719		11,591
Total assets			22,715		22,715
Current liabilities					
Trade and other payables	14	(8,027)		(6,629)	
Provisions	15	(689)		(732)	
Total current liabilities			(8,716)		(7,361)
Non-current assets plus net current assets			13,999		15,354
Non-current liabilities					
Provisions	15		(245)		(264)
Total non-current liabilities			(245)		(264)
Total assets less liabilities			13,754		15,090
Taxpayers' equity					
Revaluation Reserve			4,240		4,170
General Reserve			9,514		10,920
(See Statement of Changes in Taxpayers' Equity)			13,754		15,090

The financial statements on pages 90 to 115 were approved by the Board on 5th November 2015 and were signed on its behalf by:



Professor Seamus Kennedy MVB PhD MRCVS FRCPATH
 Chief Executive Officer
 Date: 30th November 2015

The notes on pages 94 to 115 form part of these accounts.

Statement of Cash Flows

for the year ended 31 March 2015

	Note		2014-15 £000		2013-14 £000
Cash flows from operating activities					
Net expenditure after notional charges			(41,893)		(40,225)
<i>Adjustments for non-cash transactions</i>					
Non-cash transactions	4	4,340		4,487	
Use of bad debt provision		(2)		(9)	
Decrease in trade receivables	12	233		5,436	
(Increase) in Inventories	11	(108)		(25)	
Increase/(Decrease) in trade payables	14	326		(5,653)	
Use of provisions	15	(448)		(919)	
			4,341		3,317
Net cash outflow from operating activities			(37,552)		(36,908)
Cash flows from investing activities					
Purchase of property, plant and equipment	6	(1,561)		(1,260)	
Purchase of intangible assets	7	(291)		(43)	
Purchase of biological assets	8	(24)		(43)	
Proceeds of disposal of property, plant and equipment		31		10	
Proceeds of disposal of biological assets		677		689	
Net cash outflow from investing activities			(1,168)		(647)
Cash flows from financing activities					
Grant from sponsoring department		39,029		40,034	
Net financing			39,029		40,034
Net (decrease)/increase in cash and cash equivalents in the year			309		2,479
Cash and cash equivalents at the beginning of the year	13		2,726		247
Cash and cash equivalents at the end of the year	13		3,035		2,726

The notes on pages 94 to 115 form part of these accounts.

Statement of Changes in Taxpayers' Equity

for the period ended 31 March 2015

	Note	SoCNE Reserve £000	Revaluation Reserve £000	Total Reserves £000
Balance as at 31 March 2013		9,699	4,832	14,531
Changes in Taxpayers Equity 2013-14				
Grant from sponsoring entity		40,034	-	40,034
Net loss on revaluation of property, plant and equipment	6,10	-	(668)	(668)
Net gain on revaluation of intangible assets	7,10	-	6	6
Release of reserves to the SoCNE		(31)	-	(31)
Notional charges - IT Assist	4	1,443	-	1,443
Comprehensive Expenditure for the year		(40,225)	-	(40,225)
		1,221	(662)	559
Balance at 31 March 2014		10,920	4,170	15,090
Changes in Taxpayers Equity 2014-15				
Grant from sponsoring entity		39,029	-	39,029
Net gain on revaluation of property, plant and equipment	6,10	-	68	68
Net gain on revaluation of intangible assets	7,10	-	2	2
Release of reserves to the SoCNE		(4)	-	(4)
Notional charges - IT Assist	4	1,462	-	1,462
Transfers between reserves		-	-	-
Comprehensive Expenditure for the year		(41,893)	-	(41,893)
		(1,406)	70	(1,336)
Balance at 31 March 2015		9,514	4,240	13,754

The notes on pages 94 to 115 form part of these accounts.

Notes to the accounts

for the year ended 31 March 2015

1. Statement of accounting policies

These financial statements have been prepared in accordance with the 2014-15 *Government Financial Reporting Manual (FReM)* issued by DFP. The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FReM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the Agri-Food and Biosciences Institute (AFBI) for the purpose of giving a true and fair view has been selected. The particular policies adopted by the Agri-Food and Biosciences Institute are described below. They have been applied consistently in dealing with items that are considered material to the accounts. These financial statements have been prepared in sterling and are rounded to the nearest £'000.

Accounting convention

These accounts have been prepared under the historical cost convention modified to account for the revaluation of plant and equipment, intangible assets, biological assets and inventories.

Property, plant and equipment

During 2014-15 AFBI transferred the roof on the building at Hillsborough to DARD. AFBI does not own any other land or buildings but leases them from DARD.

Other non-property assets are stated at current cost using appropriate indices to account for the effects of inflation. No independent valuer is involved in the valuation of assets. The date of the revaluation is the reporting date of 31 March each year.

The threshold for capitalisation is £5,000 excluding any VAT capitalised. From 2014-15 VAT has been capitalised on non-current assets relating to non-commercial projects.

Donated fixed assets

Donated fixed assets are capitalised at their fair value on receipt and this value is credited to the Statement of Comprehensive Net Expenditure (SoCNE) reserve. Donated fixed assets are valued and depreciated as described below for purchased assets. Gains and losses on revaluations are also taken to the SoCNE reserve and, each year, an amount equal to the depreciation charge on the asset is released from the donated asset charged to the Statement of Comprehensive Net Expenditure. Any impairment on donated assets charged to the Statement of Comprehensive Net Expenditure is matched by a transfer from the SoCNE reserve.

Depreciation

Depreciation is charged on a straight line basis in order to write off the valuation of assets, less estimated residual value, of each asset over the expected useful life.

Assets are generally depreciated from the period of acquisition and not depreciated in the period of disposal. However, an exception to this practice occurs when AFBI makes a late addition in the financial year. Where the cost of the asset remains unpaid at the date the financial statements are prepared, the depreciation charge for the asset is included in the following year's financial statements.

The useful lives of tangible assets, which are reviewed regularly, are:

Plant	3 to 39 years
Equipment	3 to 24 years
Transport equipment: boats	4 to 15 years
Transport equipment: vehicles	5 to 21 years
Information technology: computers	3 to 25 years

The useful lives of intangible assets, which are reviewed regularly, are:

Software licences	2 to 11 years
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The Hillsborough roof was not depreciated before its transfer to DARD.

Intangible assets

Software licences are stated at current cost using appropriate indices to account for the effects of inflation. Software assets are depreciated from the period of acquisition and not depreciated in the period of disposal.

Biological assets

Biological assets comprise cattle, sheep, pigs and goats which are used for research purposes. They are categorised according to the attributes used in the market to facilitate their valuation at the reporting date. Cattle were further grouped as follows:

- Beef cattle are grouped by gender, breed and age.
- Dairy cattle are grouped by lactation and breed.

Biological assets are valued at fair value less estimated costs at the point of sale at the end of the reporting period. This is further disclosed in accordance with IAS 41 Agriculture, by showing the aggregate value of purchases, sales, changes in value due to changes in physical conditions of the herd and changes in the value of the herd due to changes in market price.

Changes in value due to changes in physical conditions of the herd represent births which took place during the current financial year. The economic value of these transactions is debited or credited to the Statement of Comprehensive Net Expenditure when they occur.

Changes in value of the herd due to changes in market price represent the difference between the purchase cost or the value brought forward of each animal and the market value at the end of the reporting period. The difference is recognised in the Statement of Comprehensive Net Expenditure.

Inventories

Inventories are valued at the lower of cost and net realisable value.

Research and Development Expenditure

Research and development expenditures include all costs relating to the scientific and technical patent work, education and training necessary to ensure the development, start-up and commercialisation of new or improved products or processes.

Research expenditure is recognised as an expense when incurred.

Development expenditure on new or substantially improved products is capitalised as an intangible asset and amortised through cost of sales over the expected useful life of the product concerned. Capitalisation commences from the point at which the technical feasibility and commercial viability of the product can be demonstrated and AFBI Management is satisfied that it is probable that future economic benefit will result from the product once completed. This is usually at the point of regulatory filing in a major market and approval is highly probable. Capitalisation ceases when the product is ready for launch.

Cash and cash equivalents

Cash and cash equivalents comprise of cash and deposits with commercial banks. At each year end, the carrying value of cash at bank and in hand approximates their fair value due to their short-term nature.

Operating Income

Revenue is recognised when it is probable that the economic benefits will flow to AFBI and the revenue can be reliably measured. Revenue is recognised as follows:

For sales of services: revenue is recognised in the accounting period in which the services are rendered by reference to stage of completion of the specific transaction assessed on the basis of the actual service provided as a proportion of the total services to be provided.

For sales of goods: revenue is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer and the amount of revenue can be measured reliably.

Royalties, Charter of Ship and Rents receivable: revenue is recognised on an accruals basis in accordance with the substance of the relevant agreement. In order to estimate royalty income not yet notified, a review is undertaken of sales trends in the past.

Employee benefits

Under the requirements of IAS 19 Employee Benefits, staff costs must be recorded as an expense as soon as the organisation is obligated to pay them. This includes the cost of any untaken leave that has been earned at the year end. The figure has been based on a specific report run from the Personnel system which calculates the year end balance using leave balances on the system. It is not anticipated that the level of untaken annual and flexi leave will vary significantly from year to year.

Leases

Operating lease rentals are charged directly to the Statement of Comprehensive Net Expenditure over the period of the lease. There are no finance leases.

Financial instruments

AFBI is not allowed to borrow or invest surplus funds as per the Management Statement and Financial Memorandum. Financial assets and liabilities are generated by operational activities and are not held to handle the risk profile facing AFBI in undertaking its operations.

Liquidity risk

AFBI's net revenue resource requirements are financed by the Grant in Aid agreed with the Department of Agriculture and Rural Development, as is its capital expenditure. It is not, therefore, exposed to significant liquidity risks.

Interest rate risk

All AFBI's financial assets and liabilities carry nil rate of interest and it is not therefore exposed to significant interest rate risk.

Foreign currency risk

The majority of AFBI's operations, assets and liabilities are denominated in Sterling. Therefore its exposure to foreign currency risk is not significant.

Grant in aid receivable

Grant in aid represents net funding received from DARD and is credited to SoCNE reserve.

Provisions

AFBI makes provisions for liabilities and charges where, at the Statement of Financial Position date, a legal or constructive liability exists (i.e. a present obligation for past events exists), where the transfer of economic benefits is probable and a reasonable estimate can be made. Where the time value of money is material, AFBI discounts the provision to its present value using a standard government discount rate, which currently stands at 2.20%.

Estimation techniques used and changes in accounting estimates

Provision is made for all debts greater than 90 days old which are considered doubtful.

The effect of a change in accounting estimate is recognised by including it in the Statement of Comprehensive Net Expenditure in:

- the period of the change, if the change affects that period only;
- the period of the change and future periods, if that change affects both.

Value Added Tax

Value Added Tax (VAT) is accounted for in accordance with the Statement of Standard Accounting Practice 5, in the absence of an International Financial Reporting Standard (IFRS). Amounts are shown net of VAT, and irrecoverable VAT is charged to the Statement of Comprehensive Net Expenditure.

Third party assets

AFBI does not hold any third party assets.

Operating segments

IFRS 8 Operating Segments requires the identification of operating segments on the basis of internal reports reviewed by AFBI's Chief Decision Maker in order to allocate resources to each specific segment and assess its performance.

AFBI has completed a review against the criteria set out in IFRS 8 and considers that the disclosure format within the accounts meets IFRS 8 criteria.

Contingent liabilities

In addition to contingent liabilities disclosed in accordance with IAS 37, AFBI discloses for parliamentary reporting and accountability purposes certain statutory and non-statutory contingent liabilities where the likelihood of a transfer of economic benefit is remote, but which have been reported to the Assembly in accordance with the requirements of Managing Public Money Northern Ireland.

Where the time value of money is material, contingent liabilities which are required to be disclosed under IAS 37 are stated at discounted amounts and the amount reported to the Assembly separately noted.

Contingent liabilities that are not required to be disclosed by IAS 37 are stated at the amounts reported to the Assembly.

Reserves

Revaluation reserve

The Revaluation Reserve reflects the unrealised balance of the cumulative indexation and revaluation adjustments to assets other than donated assets and those funded by grants.

SoCNE Reserve

The SoCNE Reserve represents AFBI's total assets less total liabilities which is not represented by other reserves and financing items. It is a notional reserve for financial reporting purposes only. AFBI are not permitted to carry forward any cash or reserves. Any surplus cash must be returned to DARD at the end of the financial year.

Pensions

Past and present employees are covered by the provisions of the Principal Civil Service Pension Scheme (Northern Ireland) (PCSPS (NI)), which is a defined benefit scheme and is unfunded. AFBI recognises the expected cost of providing pensions on a systematic and rational basis over the period during which it benefits from employees' services by payment to the PCSPS (NI) of amounts calculated on an accruals basis.

All pension contributions are charged to the Statement of Comprehensive Net Expenditure when incurred.

Impending Application of Newly Issued Accounting Standards Not Yet Effective

Management has reviewed new accounting standards that have been issued but are not yet effective, nor adopted early for these accounts.

The IASB have issued IFRS14 Regulatory Deferral Accounts effective from all accounting periods after 1 January 2016, IFRS15 Revenue from Contracts and Customers effective from all accounting periods after 1 January 2017 and IFRS 13 Fair Value Measurements effective from 2015/16. IASB have also amended IAS 36 Impairment of Assets which is to be applied when IFRS 13 is introduced.

Management consider that there are no items likely to have a significant impact on the accounts in the period of initial application.

2. Statement of Operating Costs by Operating Segment

Segmental selection is based on the organisational structure that AFBI uses to make decisions on resource allocation as well as the availability of financial information based on that structure. AFBI has two operational divisions, **Sustainable Agri-Food Sciences Division (SAFSD)** and **Veterinary Sciences Division (VSD)**. These two operational divisions are supported by the **Finance and Corporate Affairs Division (FCAD)**. The operational divisions are:

Sustainable Agri-Food Sciences Division (SAFSD) provides statutory services including certification of monitoring for the Department of Agriculture and Rural Development (DARD) of pasture, seeds and plant health, and provides specialist advice on weeds, crop plants, varieties and disease problems. SAFSD provides scientific support for the growth, sustainability and competitiveness of Northern Ireland's farming, fishing and agri-food industries, and assists the industry to maintain high standards of environmental protection and animal welfare. SAFSD's research takes account of environmental needs and sustainable economic growth in Northern Ireland's countryside.

Veterinary Sciences Division (VSD) delivers world class veterinary science to the animal, food and fish based sectors of the agri-food industry.

Analysis of net expenditure by segment

	2014-15				2013-14			
	SAFSD	VSD	FCAD	Total	SAFSD	VSD	FCAD	Total
Gross expenditure	22,253	11,834	20,708	54,795	21,315	13,373	19,407	54,095
Depreciation & Amortisation	1,578	980	173	2,731	1,947	197	1,103	3,247
Taxation charges	-	-	887	887	-	-	(18)	(18)
Notional charges	-	-	1,462	1,462	-	-	1,443	1,443
	23,831	12,814	23,230	59,875	23,262	13,570	21,935	58,767
Income - Domicile	(6,242)	(2,341)	(6,692)	(15,275)	(6,756)	(2,416)	(6,983)	(16,155)
Income - Non Domicile	(2,273)	(434)	-	(2,707)	(1,901)	(479)	(7)	(2,387)
Income	(8,515)	(2,775)	(6,692)	(17,982)	(8,657)	(2,895)	(6,990)	(18,542)
Net expenditure	15,316	10,039	16,538	41,893	14,605	10,675	14,945	40,225
Total assets	10,745	3,298	8,672	22,715	9,370	3,494	9,851	22,715
Total liabilities	(2,665)	(1,958)	(4,338)	(8,961)	(1,958)	(731)	(4,936)	(7,625)
Net assets	8,080	1,340	4,334	13,754	7,412	2,763	4,915	15,090

3. Staff numbers and related costs

Staff costs comprise:

	Permanently employed staff	Others	2014-15 £000 Total	2013-14 £000 Total
Wages and salaries	22,033	1,078	23,111	22,999
Social security costs	1,618	-	1,618	1,599
Other pension costs	4,203	-	4,203	4,099
Sub Total	27,854	1,078	28,932	28,697
Less recoveries in respect of outward secondments	(58)	-	(58)	(32)
Total net costs	27,796	1,078	28,874	28,665

Pension scheme details

PCSPS (NI)

The Principal Civil Service Pension Scheme (Northern Ireland) (PCSPS(NI)) is an unfunded multi-employer defined benefit scheme but the Agri-Food and Biosciences Institute is unable to identify its share of the underlying assets and liabilities. The most up to date actuarial valuation was carried out as at 31 March 2012. This valuation is then reviewed by the Scheme Actuary and updated to reflect current conditions and rolled forward to the reporting date of the DFP Superannuation and Other Allowances Resource Accounts as at 31 March 2015.

For 2014-15, employers' contributions of £4,177,676 were payable to the PCSPS(NI) (2013-14 £4,074,995) at one of four rates in the range 18% to 25% of pensionable pay, based on salary bands. The scheme's Actuary reviews employers' contributions every four years following a full scheme valuation. A new valuation scheme based on data as at 31 March 2012 was completed by the Actuary during 2014-15. This valuation was used to determine employer contribution rates for the introduction of a new career average earning scheme from April 2015. From 2015-16, the new rates will range from 20.8% to 26.3%. The contribution rates are set to meet the cost of the benefits accruing during 2014-15 to be paid when the member retires, and not the benefits paid during this period to existing pensioners.

Employees can opt to open a partnership pension account, a stakeholder pension with an employer contribution. Employers' contributions of £24,041 (2013-14: £22,772) were paid to one or more of the panel of three appointed stakeholder pension providers. Employer contributions are age-related and range from 3% to 12.5% (2013-14 3% to 12.5%) of pensionable pay. Employers also match employee contributions up to 3% of pensionable pay. In addition, employer contributions of £1,535, 0.8% (2013-14: £1,453, 0.8%) of pensionable pay, were payable to the PCSPS(NI) to cover the cost of the future provision of lump sum benefits on death in service and ill health retirement of these employees.

Contributions due to the partnership pension providers at the reporting period date were £0 (2013-14: £0). Contributions prepaid at that date were £0 (2013-14: £0).

1 individual (2013-14: 4) retired early on ill-health grounds; the total additional accrued pension liabilities in the year amounted to £0 (2013-14: £5,929).

Average number of persons employed

The average number of whole-time equivalent persons employed during the year was as follows.

	Permanent staff	Others	2014-15 Total	2013-14 Total
Directly Employed	706	74	780	782
Other	0	37	37	54
Total	706	111	817	836

Other staff are defined as agency staff employed on a temporary contract.

3.1 Reporting of Civil Service and other compensation schemes – exit packages

Exit package cost band	Number of Compulsory Redundancies	Number of Other Departures Agreed	Total Number of Exit Packages by cost band
<£10,000	-	4 (2013-14, 1)	4 (2013-14, 1)
£10,000 - £25,000	-	-	-
£25,000 - £50,000	-	-	-
£50,000 - £100,000	-	-	-
£100,000 - £150,000	-	-	-
£150,000 - £200,000	-	-	-
Total number of exit packages	-	4 (2013-14, 1)	4 (2013-14, 1)
Total resource cost/£	-	26,345 (2013-14, 4,131)	26,345 (2013-14, 4,131)

Redundancy and other departure costs have been paid in accordance with the provisions of the Civil Service Compensation Scheme (Northern Ireland), a statutory scheme made under the Superannuation (Northern Ireland) Order 1972. Exit costs are accounted for in full in the year of departure. Where the Institute has agreed early retirements, the additional costs are met by the Institute and not by the Civil Service pension scheme. Ill-health retirement costs are met by the pension scheme and are not included in the table.

4. Other Expenditure

	Note	2014-15 £000		2013-14 £000	
<i>Other Expenditure</i>					
Lease of land and buildings		6,424		6,383	
Laboratory consumables		2,723		2,426	
Ship operating costs		2,196		1,762	
Other expenses		1,655		1,458	
Rates and water		1,465		1,466	
Lab equipment maintenance and other expenses		1,383		1,653	
Irrecoverable VAT ¹		1,319		1,432	
Contracted out services		1,193		1,094	
Electricity		1,102		1,271	
Animal feed and veterinary expenses		848		813	
Training, conferences and library expenses		724		611	
Royalty administration fees		652		681	
Gas		543		581	
Apparatus, glassware and minor equipment		488		751	
Clinical and other waste disposal costs		422		426	
Repairs and maintenance		410		543	
Travel and subsistence		366		390	
Motor and tractor expenses		295		313	
Telephone		259		250	
Postage, printing and stationery		218		234	
Computer support		170		166	
Oil		144		175	
Carbon reduction		138		118	
Marketing and advertisements		106		175	
Plants, shrubs, fertiliser		95		172	
Livestock expenses		93		70	
Legal costs and compensation		78		159	
Hire of plant and vehicles		53		103	
Protective clothing		50		55	
Internal Audit fees		38		29	
Rent of land and buildings		36		52	
External Audit fees ³		31		40	
Hospitality		11		9	
Consultancy costs		-		14	
Taxation fines and penalties		(12)		(274)	
			25,716		25,601

	Note	2014-15 £000		2013-14 £000	
Non-cash items					
Depreciation	6	2,664		3,149	
Amortisation	7	67		98	
Notional charges		1,462		1,443	
Provisions provided for in year	15	386		192	
Loss on disposal of non current assets		279		47	
Decrease in value of livestock due to deaths	8	114		61	
Increase in debt provision		58		2	
Bad debts written off		-		1	
Release from SoCNE reserve		(3)		(31)	
Impairment/Indexation of fixed assets	10	(13)		242	
Change in value of livestock due to changes in physical conditions of the herd	8	(223)		(107)	
Change in market value of livestock	8	(292)		(311)	
Profit on disposal of biological assets		(159)		(299)	
			4,340		4,487
Taxation charges					
Taxation charges ²			887		(18)
			30,943		30,070

¹In Northern Ireland, VAT cannot be reclaimed on research performed for Government Departments or on work which is grant funded. As a proportion of AFBI's work is research for Government Departments and/or is grant funded, it cannot claim back all VAT. The "Irrecoverable VAT" line is the amount of VAT which AFBI cannot claim from HMRC. This VAT expense should ideally be expensed to the various Government / grant funded projects. However, the agreed process with HMRC is complex and AFBI are currently investigating means by which it can accurately allocate the expense to individual projects.

²In 2013-14 the taxation charge of (£18k) is made up of a charge for the year of £1,167k and a reduction in previous years' taxation charge of £1,185k. Corporation tax is charged on AFBI's royalty income, adjusted for a 10% admin fee, rewards to staff payments and profit/loss on commercial projects. The rate of corporation tax for 2014-15 was 21% (2013-14, 23%).

³The fee for the audit of 2014-15 and 2013-14 financial statements was £33,400. The variances from the figures above are as a result of differences between estimated and actual charges across years.

During the year AFBI did not purchase any non-audit services from its auditor (NIAO).

5. Income

	2014-15 £000	2013-14 £000
Income from analytical, diagnostic work and research contracts	8,023	8,481
EU Income	2,588	2,194
Royalties	6,523	6,806
Sale of general produce and livestock	700	829
Charter of the ship	20	125
Refunds	57	61
Recoveries in respect of outward secondments	58	32
Rents receivable	13	14
Total	17,982	18,542

Royalty income is received gross of a 10% administration fee. The administration fee is then paid over on receipt of a VAT invoice.

Fees and charges

A detailed analysis of fees and charges information is not provided as the full cost of each service provided does not exceed £1m.

6. Property, Plant and Equipment 2014-15

	Information Technology £000	Plant & Machinery* £000	Boats & Motor Vehicles £000	Land & Buildings £000	Total £000
Cost or valuation					
At 1 April 2014	996	25,627	4,628	217	31,468
Additions	44	2,444	144	-	2,632
Disposals	(4)	(1,373)	(153)	(217)	(1,747)
Revaluations	5	254	24	-	283
At 31 March 2015	1,041	26,952	4,643	-	32,636
	Information Technology £000	Plant & machinery £000	Boats & Motor Vehicles £000	Land & Buildings £000	Total £000
Depreciation					
At 1 April 2014	804	17,983	3,169	-	21,956
Charge for the year	83	2,159	422	-	2,664
Relifing adjustment	-	-	-	-	-
Disposals	(4)	(1,288)	(149)	-	(1,441)
Revaluations	4	173	25	-	202
At 31 March 2015	887	19,027	3,467	-	23,381
Carrying Amount					
At 31 March 2014	192	7,644	1,459	217	9,512
Carrying Amount					
At 31 March 2015	154	7,925	1,176	-	9,255
Asset financing:					
Owned	154	7,925	1,176	-	9,255
Finance Leased	-	-	-	-	-
On-balance sheet PFI Contracts	-	-	-	-	-
Carrying Amount 31 March 2015	154	7,925	1,176	-	9,255

* Plant & Machinery includes a donated asset of scientific equipment with a carrying value of £3,437 at 31 March 2015.

6. Property, Plant and Equipment

2013-14

	Information Technology £000	Plant & Machinery* £000	Boats & Motor Vehicles £000	Land & Buildings £000	Total £000
Cost or valuation					
At 1 April 2013	1,361	27,676	4,800	220	34,057
Additions	49	1,318	84	(3)	1,448
Disposals	(342)	(816)	(18)	-	(1,176)
Revaluations	(72)	(2,551)	(238)	-	(2,861)
At 31 March 2014	996	25,627	4,628	217	31,468
	Information Technology £000	Plant & machinery £000	Boats & Motor Vehicles £000	Land & Buildings £000	Total £000
Depreciation					
At 1 April 2013	1,026	17,985	2,866	-	21,877
Charge for the year	175	2,494	480	-	3,149
Disposals	(342)	(762)	(15)	-	(1,119)
Revaluations	(55)	(1,734)	(162)	-	(1,951)
At 31 March 2014	804	17,983	3,169	-	21,956
Carrying Amount					
At 31 March 2013	335	9,691	1,934	220	12,180
Carrying Amount					
At 31 March 2014	192	7,644	1,459	217	9,512
Asset financing:					
Owned	192	7,644	1,459	217	9,512
Finance Leased	-	-	-	-	-
On-balance sheet PFI Contracts	-	-	-	-	-
Carrying Amount 31 March 2014	192	7,644	1,459	217	9,512

* Plant & Machinery includes a donated asset of scientific equipment with a carrying value of £6,502 at 31 March 2014.

Land and buildings additions of (£3k) relates to the reversal of accruals from the previous financial year.

7. Intangible assets

Intangible assets comprise of software licences.

2014-15	£000
Cost or valuation	
At 1 April 2014	602
Additions	291
Disposals	(25)
Revaluation	4
At 31 March 2015	872
	£000
Amortisation	
At 1 April 2014	389
Charge for the year	67
Disposals	(21)
Revaluations	2
At 31 March 2015	437
Carrying Amount	
At 31 March 2014	213
Carrying Amount	
At 31 March 2015	435
2013-14	£000
Cost or valuation	
At 1 April 2013	623
Additions	43
Disposals	(75)
Revaluation	11
At 31 March 2014	602
	£000
Amortisation	
At 1 April 2013	361
Charge for the year	98
Disposals	(75)
Revaluations	5
At 31 March 2014	389
Carrying Amount	
At 31 March 2013	262
Carrying Amount	
At 31 March 2014	213

8. Biological Assets

	2014-15 £000	2013-14 £000
Livestock at Fair Value		
Valuation as at 01 April	1,399	1,389
Purchases	27	43
Sales	(521)	(390)
Decreases in value due to deaths	(114)	(61)
Changes in value due to changes in physical conditions of the herd (births)	223	107
Changes in value due to changes in market price	292	311
Valuation as at 31 March	1,306	1,399

9. Financial Instruments

As the cash requirements of Agri-Food and Biosciences Institute (AFBI) are met through Grant in Aid provided by DARD and commercial income received, financial instruments play a more limited role in creating and managing risk than would apply to a non-public sector body. The majority of financial instruments relate to contracts to buy non-financial items in line with AFBI's expected purchase and usage requirements and AFBI is therefore exposed too little credit, liquidity or market risk.

10. Indexation

Indexation of non-current assets took place during 2014-15 which resulted in £70k being credited to the Revaluation Reserve and indexation of £13k being credited to the Statement of Comprehensive Net Expenditure. Indexation of non-current assets took place during 2013-14 which resulted in £662k being debited to the Revaluation Reserve and indexation of £242k being charged to the Statement of Comprehensive Net Expenditure.

Breakdown of revaluations/indexation by category

	2014-15 £000	2013-14 £000
Charged to statement of comprehensive net expenditure	(13)	242
Charged to revaluation reserve	(70)	662
	(83)	904

11. Inventories

	2014-15 £000	2013-14 £000
Feedstuffs and sundry stocks at Hillsborough and Stoney Road	371	237
Consumables at Newforge and Stoney Road	131	157
	502	394

12. Trade receivables and other current assets

	2014-15 £000	2013-14 £000
Amounts falling due within one year;		
Trade receivables	1,324	2,020
Other receivables	62	76
Prepayments and accrued Income	5,903	5,962
EU accrued income	893	413
	8,182	8,471

12.1 Intra-Government Balances

	Amounts falling due within one year	
	2014-15 £000	2013-14 £000
Balances with other central government bodies	773	2,182
Balances with local authorities	10	13
Balances with NHS bodies	-	-
Balances with public corporations and trading fund	-	2
<i>Subtotal: intra-government balances</i>	783	2,197
Balances with bodies external to government	7,399	6,274
Total receivables at 31 March	8,182	8,471

13. Cash and cash equivalents

	2014-15 £000	2013-14 £000
Balance at 1 April	2,726	247
Net change in cash and cash equivalent balances	309	2,479
Balance at 31 March	3,035	2,726
The following balances at 31 March were held at:		
Commercial banks and cash in hand	3,035	2,726
Balance at 31 March	3,035	2,726

14. Trade payables and other current liabilities

Amounts falling due within one year	2014-15 £000	2013-14 £000
VAT	120	9
Other taxation and social security	654	344
Trade payables	652	827
Other payables	35	29
Capital creditors	1,504	432
Accruals and deferred Income	5,062	4,988
	8,027	6,629

14.1 Intra-Government Balances

	Amounts falling due within one year	
	2014-15 £000	2013-14 £000
Balances with other central government bodies	1,335	1,303
Balances with local authorities	1	2
Balances with public corporations and trading funds	41	62
<i>Subtotal: intra-government balances</i>	1,377	1,367
Balances with bodies external to government	6,650	5,262
Total payables at 31 March	8,027	6,629

15. Provisions for liabilities and charges

2014-15

	Legal £'000	Decommissioning Costs £'000	Early Departure £'000	Injury Benefit £'000	Total £'000
Balance at 1 April 2014	675	80	46	195	996
Provided in the year	555	-	-	-	555
Provisions not required written back	(169)	-	-	-	(169)
Provisions utilised in year	(400)	-	(33)	(15)	(448)
Balance at 31 March 2015	661	80	13	180	934

Analysis of expected timing of discounted flows

	Legal £'000	Decommissioning costs £'000	Early Departure £'000	Injury Benefit £'000	Total £'000
Not later than one year	661	-	13	15	689
Later than one year and not later than five years	-	-	-	60	60
Later than five years	-	80	-	105	185
Balance at 31 March 2015	661	80	13	180	934

2013-14

	Legal £'000	Decommissioning Costs £'000	Early Departure £'000	Injury Benefit £'000	Total £'000
Balance at 1 April 2013	1,345	80	89	209	1,723
Provided in the year	241	-	-	-	241
Provisions not required	(49)	-	-	-	(49)
Provisions utilised in year	(862)	-	(43)	(14)	(919)
Balance at 31 March 2014	675	80	46	195	996

Analysis of expected timing of discounted flows

	Legal £'000	Decommissioning Costs £'000	Early Departure £'000	Injury Benefit £'000	Total £'000
Not later than one year	675	-	43	14	732
Later than one year and not later than five years	-	-	3	56	59
Later than five years	-	80	-	125	205
Balance at 31 March 2014	675	80	46	195	996

Provisions have not been discounted as these relate to payments due to be paid in the near future.

Legal

This relates to personal injury legal cases and intellectual property claims. Legal claims are assessed by independent solicitors and a provision of 100% of the likely maximum claim value is made. This percentage is to be reviewed on an ongoing basis to ensure it continues to represent a reasonable estimate of the expenditure on such claims.

Decommissioning costs

This relates to a piece of equipment which holds radioactive material and as such falls under the High Activity Sealed Radioactive Sources (HASS) Regulations 2003. The material is used by AFBI in the course of its business. The provision is required to cover the cost of compliance with HASS Regulations when the equipment is disposed of.

Early Departure

This relates to pension payments to staff members who took early retirement. AFBI are required to make the payments until the individuals reach 60 years of age.

Injury Benefit

This relates to payments to staff members who have suffered an impairment to earnings as a result of an injury that has been sustained within the context of one of the qualifying conditions outlined within the legislation governing the scheme, which is known as the Civil Service Injury Benefit Scheme (NI) (CSIBS(NI)). Injury benefit is paid when a qualifying injury impairs the individual's earning capacity.

16. Capital commitments

	2014-15 £000	2013-14 £000
Contracted Capital Commitments at 31 March not otherwise included in these financial statements		
Assets under construction	0	0

17. Commitments under leases

17.1 Operating leases

AFBI has an operating lease with DARD for the land and buildings it occupies. Total future minimum lease payments under operating leases are given in the table below for each of the following periods (*2013/14 figures restated to reflect the remaining part of the contractual commitment):

	2014-15 £000	2013-14 (Restated*)£000
Obligations under operating leases comprise:		
Land and buildings		
Not later than one year	6,188	6,382
Later than one year and not later than five years	12,376	19,146
	18,564	25,528
Photocopiers		
Not later than one year	1	7
Later than one year and not later than five years	0	1
	1	8

17.2 Finance leases

AFBI has no finance lease commitments at the year end.

18. Commitments under PFI contracts

AFBI had no PFI contracts during 2014/2015.

19. Other financial commitments

AFBI had no other financial commitments at the year end.

20. Contingent liabilities disclosed under IAS 37

AFBI uses fixed term contracts of employment to support its core base of permanent staff in order to manage peaks and troughs of work. Fixed term contract employees are entitled to redundancy payments on expiry of their fixed term contract if they have 2 or more years' service, the work that they are undertaking is ceasing and there are no suitable redeployment vacancies. AFBI has reviewed its remaining fixed term contracts and considers that it is unlikely that their expiry will attract redundancy payments either because the underlying post will still be required or because a suitable redeployment opportunity will become available.

21. Losses and special payments

AFBI had one instance of a loss which amounted to £4k. There were ten losses in 2013-14 which amounted to £91k.

	2014-15 £000	2013-14 £000
Total		
1 case amounting to £4k in 2014-15	4	-
10 cases amounting to £91k in 2013-14	-	91
Details of cases over £250k	-	-
Cash Loss	-	-
(Reduction) for corporation tax penalty and interest on royalty income	-	(274)*

*Following registration for corporation tax in May 2012, HM Revenue and Customs (HMRC) advised that AFBI had a tax liability based upon the application of tax to the royalty income stream from its establishment on 1 April 2006. The demand included £739k estimated charge for penalty and interest charges, which was disclosed in 2012-13 as a loss. AFBI actively engaged with HMRC to quantify the amount of penalties and interest which were actually due. This resulted in a reduction of £274k, which is reflected in 2013-14 and has now been resolved.

The 2013/14 provisions (Note 15) included an amount in respect of an ongoing legal claim associated with royalty income received by AFBI for which the Chief Executive was a potential beneficiary. The legal claim was settled during the year and the settlement amount accrued in 2014-15. The quantum of this special payment is not disclosed because the terms of settlement are confidential.

22. Related-party transactions

The Department of Agriculture and Rural Development is the sponsor department of AFBI with which it had various material transactions during the year and is regarded as a related party. DARD's executive agencies also had transactions with AFBI.

In addition AFBI had some transactions with other government departments and central government bodies. Most of these transactions have been with Northern Ireland departments and their executive agencies such as DFP (including CPD and Pensions Branch), DCAL, DOE, FSA (NI), HMRC, DEFRA & Northern Ireland Water.

Within the provisions (Note 15) there had been an amount in respect of an ongoing legal claim in respect of royalty income received by AFBI for which the Chief Executive was a potential beneficiary. The legal claim was settled during the year and the terms of settlement are confidential. The amount of the settlement is now accrued in 2014-15.

A member of the AFBI Board is employed by an organisation to which AFBI provides scientific research services, Dunbia. This person was not a board member during 2014/15. Two current members of the AFBI Board are employed by an organisation to which AFBI provides scientific research services, Scottish Environmental Protection Agency and Warrenpoint Harbour Authority. In accordance with IAS 24 (2010) the transactions that occurred within the financial year and any balances at year end are shown below:

	Dunbia		Scottish Environmental Protection Agency		Warrenpoint Harbour Authority	
	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14
	£000	£000	£000	£000	£000	£000
Revenues generated during the year	9	2	16	-	22	-
Expenditure incurred during the year	(2)	-	-	-	-	-
Net value of transactions at year end	7	2	16	-	22	-
	2015 £000	2014 £000	2015 £000	2014 £000	2015 £000	2014 £000
Amount owed to AFBI	7	1	-	-	14	-
Amount owed by AFBI	-	-	-	-	-	-
Net balance at year end	7	1	-	-	14	-

Other than the above, no Board member, key manager or other related party has undertaken any material transactions with AFBI during the year.

Any other compensation payments issued to the AFBI Board in relation to IAS 19 Employee Benefits are disclosed within the Remuneration Report.

23. Third-party assets

AFBI does not hold any third party assets.

24. Events after the Reporting Period

AFBI does not have any events after the reporting period to disclose.

Date of authorisation for issue

The Accounting Officer authorised these financial statements for issue on 8th December 2015.

Scientific excellence in Northern Ireland... ...serving the world

AFBI's mission is to maintain and enhance its reputation as a world-class scientific institute, delivering proven value to government and other customers.

AFBI provides research and development, analytical and diagnostic services, and scientific advice in agriculture, food, animal and plant health, marine and fresh water ecosystem management and the agri-environment.

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

We pride ourselves on the quality and breadth of our scientific expertise and maintain appropriate quality assured accreditation standards.

A major aim is to support industry by providing a "one-stop shop" for diverse specialist expertise and facilities.

AFBI's expertise includes:
Veterinary diagnostics; animal health and welfare; food science; crop and livestock systems; biometric traceability; plant breeding; biometrics and statistics; agricultural economics; renewable energy and non-food crop agronomy; oceanography; fish stock management, aquatic and land based ecosystem management of natural resources.

AFBI has various national and international reference laboratories.

AFBI maintains a cutting edge skills and technology base to fulfil its statutory obligations including provision of rapid, scientific response capabilities for DARD and other Departments during emergencies.

AFBI scientists have long standing experience and internationally recognised standards of providing evidence-based scientific advice to Government policy makers and commercial decision makers. We are the partner / contractor of choice for many local, national and international bodies.

AFBI has facilities sited across Northern Ireland which include modern laboratories and secure animal accommodation and has a purpose built marine research vessel. The facilities have "state of the art" equipment required to resolve scientific problems and produce sophisticated and reliable results.

Technological capabilities include:
molecular technologies; light and electron microscopy; mass spectrometry; pathogenesis studies; biosensor technology; seabed mapping and minimal processing technologies.

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