

Tailored Review of the Agri-Food and Biosciences Institute (AFBI)

Review Report

September 2018

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Executive Summary

Main Findings

Form and Function

1. DAERA requires the functions undertaken by AFBI and a local Public Sector Research Establishment (PSRE) is valued for science services that need to be delivered in Northern Ireland.
2. With respect to an organisational model, at this stage a Non-Departmental Public Body (NDPB), is considered likely to be the most appropriate, but this needs to be tested through business case analysis. However, the financial arrangements associated with NDPB status can place constraints on AFBI exploring potential externally funded science opportunities. The Agriculture (NI) Order 2004 provides AFBI with the power to form or participate in the formation of companies and while additional, appropriate permissions and governance arrangements would be necessary, AFBI could explore whether the development of such a company might be worthwhile.
3. DAERA has a responsibility to support the sustainability and competitiveness of the agri-food industry and to protect and enhance the natural environment in NI. Knowledge generation and exchange are key policy instruments in this regard in which AFBI plays a critical role.
 - A clearer definition of the roles of all parties, including AFBI's would be beneficial.
 - In the commissioning of knowledge generation, early consideration should be given to how the knowledge will be disseminated.
 - There is a need for a better "intelligent customer" role, including enhanced stakeholder engagement which can effectively articulate DAERA's current and future diagnostic, research and wider science requirements in a strategic context.
4. The Review has identified that DAERA requires its science undertaken by scientists with nationally and internationally recognised "standing", to underpin the quality of its monitoring and surveillance functions and the assurance necessary for trade of NI agri-food products. It is necessary that it commissions science of this quality from the most appropriate provider. Where AFBI can demonstrate its science is of the requisite quality and can be delivered when needed, it is likely that AFBI will continue to be the main provider of science services for DAERA. However, AFBI's current suite of functions is very wide and it may be better for it to concentrate on key areas where local delivery of services is a requirement for DAERA and where its science is internationally relevant.

AFBI also needs to take action to strategically build on its existing collaboration with other research organisations and to continue to enhance the quality and visibility of its science and to continue to attract good scientists.

5. It is important that DAERA provides AFBI with a better line of sight of its strategic direction (and vice versa). This will facilitate greater understanding of what is required by its parent department and facilitate better strategic planning by AFBI. AFBI is already moving to improve its strategic planning and this can be enhanced through better engagement with DAERA.

Effectiveness and Efficiency

6. AFBI science is held in high regard by those who use it and AFBI scientists are recognised as working hard to deliver for their customers. AFBI has a responsibility to account for its use of public money. Many AFBI interviewees described the bureaucratic burden of using AFBI's corporate support systems to record, monitor, manage and report as a significant distraction from the main purpose of their roles. These systems were not only burdensome for staff to use but did not deliver sufficiently for managers. Improvements to AFBI's corporate support systems, including its data management systems (such as records management, financial management and Laboratory Information Management System) could deliver significant benefit.
7. AFBI's demonstration of value for money is important for assuring customers (including DAERA) of the quality of service it delivers and in building scientific reputation. This could be much stronger and can be achieved by benchmarking quality and cost with comparative services from other providers.
8. DAERA's approach to funding AFBI, while compliant with "Managing Public Money NI" guidance is not considered sufficiently transparent by either party. The out-workings in terms of costs of services and how these can vary in-year are confusing to DAERA users and undermine their value for money perception of AFBI services. For better clarity of purpose, a funding model which provides core funding for functions deemed essential and transactional funding for other commissioned work should be explored.
9. Staff and estate costs are significant contributors to the cost of AFBI services. The arrangements for the management of the estate AFBI uses are complex. It is recognised that the estate is not of the correct size and needs rationalisation. While there are plans to address this, the pace of progress is slow, resulting in continuing inefficiencies. A reduction in the number of parties engaged in decision making on estate matters and moving decision making as close as practical to where it directly impacts could yield improvements.

10. AFBI is an expertise-led organisation and it is important that its people are recruited, led, motivated, managed, developed, supported, recognised and rewarded in a way that fully recognises its staff are the key to its success. AFBI has a public service ethos and this is reflected in its Values and Behaviours statement. A People Strategy will be central to supporting the achievement of these goals and embedding its Values.

Governance Arrangements

11. In general the governance arrangements in place between AFBI and DAERA are considered strong and compliant with Department of Finance requirements.

12. With respect to sponsorship management, planning and reporting mechanisms operate too slowly to facilitate timely agreement, and assessment of effectiveness and value for money. This leads to frustration, strain and ultimately a loss of trust in both parties. It is necessary to review the current approaches/systems and seek to adjust/revise/replace so they operate in a timely way. In doing so, it is essential they continue to meet the governance and accountability requirements necessary for a NDPB.

13. The Cabinet Office issued good practice guidance for the relationship between Departments and their Arms' Length Bodies (ALBs) in February 2017. The DAERA / AFBI sponsor approach should be reviewed and adjusted to align with this. A commitment to openness and timeliness by both parties will help build the trust and respect necessary for a positive relationship.

14. Finally, the AFBI Board is considered to present good challenge and leadership to the organisation. Adjustments such as relevant science expertise and regular engagement of DAERA with the Board, could address some of the issues identified through this review and facilitate it providing greater leadership to the AFBI organisation.

15. The Review Team considers the authority already exists to facilitate the implementation of the changes recommended in this report.

Summary of Recommendations

Form and Function

1. The Review confirms the principle that to obtain the objectivity required and valued by the Department and industry, DAERA's science services should continue to be delivered at arm's length from the Department.

2. DAERA should conduct an economic appraisal of the arms' length model taking account of the review outcome that a NDPB is the best model for the delivery of science services.
3. AFBI could consider the appropriateness and benefits of establishing a discrete company that may better facilitate the exploration of potential science opportunities.
4. The Knowledge Framework must implement its planned effective and flexible knowledge exchange arrangements (which set out the roles for key actors such as AFBI and CAFRE, while encouraging appropriate engagement of others) with ongoing evaluation and regular review of this process.
5. DAERA must ensure it establishes, invests in and implements a model that better facilitates appropriate input from its stakeholders and AFBI, to enable it to perform better as an intelligent customer that can identify, prioritise and articulate its current and future diagnostic, research and wider science requirements in a strategic context.
6. DAERA must ensure the science services it commissions are delivered by nationally and internationally recognised scientists working in the disciplines relevant to the science being requested.
7. DAERA should commission science from the most appropriate provider in terms of mitigating risk, obtaining quality, delivering efficiently and meeting DAERA's needs effectively.
8. DAERA should implement a more programme – based approach to science commissioning, which allows AFBI to take a longer term view when investing in the future and develop complementary research initiatives.
9. AFBI must use the AFBI Directed Research Fund (DRF) in accordance with priorities and governance agreed with DAERA and DAERA must ensure that the conditions associated with the DRF have been met before funding is released.
10. AFBI should establish appropriate strategic collaborations with universities to ensure direct involvement in the delivery of PhD and post-doctoral programmes.
11. AFBI should consider establishing its own studentships to progress its research agenda and help develop a wider pool of potential scientists for future recruitment.
12. AFBI should build on existing alliances with relevant organisations consistent with DAERA science priorities.
13. DAERA must put in place a process to provide better high level strategic direction to AFBI that clearly outlines its long, medium and short term priorities.
14. AFBI must engage better with the Department and articulate clearly its scientific and strategic ambitions and how these complement those of DAERA.

15. AFBI's science strategy must reflect and link to DAERA's strategic science priorities.
16. AFBI must identify and concentrate on specific areas of expertise, engaging in activities that underpin its national and international science standing.
17. AFBI must improve and better target its communication with stakeholders to increase the relevance and value of its communications to end users, while raising the organisation's profile.

Efficiency and Effectiveness

18. As a top priority, AFBI must review its corporate support systems and financial processes, identify gaps and take action to ensure that they are fit for purpose with respect to delivering timely information to enable effective control in all relevant areas.
19. AFBI and DAERA must refine systems and processes needed to provide stronger assurance to DAERA on quality and value for money provided by AFBI.
20. DAERA must identify appropriate Key Performance Indicators that demonstrate the level of achievement of appropriate outcomes and value for money.
21. If AFBI remains a NDPB, DAERA should investigate a funding model for AFBI based on core funding for costs deemed essential and transactional funding for commissioned work.
22. DAERA needs to consider how transactional funding is provided on a programme basis linked to higher level strategic outcomes, rather than the current emphasis on detailed aspects of delivery.
23. DAERA must consider how to achieve greater transparency on how the R&D budget in AFBI is spent.
24. AFBI should review its fees and charges with DAERA in the context of a revised funding model, ensuring any proposed changes continue to be compliant with Managing Public Money NI.
25. As a priority, DAERA should conduct an economic appraisal for the transfer of the science estate to AFBI.
26. AFBI needs to put in place a People Strategy to underpin delivery of its strategic aims and to embed its values.
27. AFBI is recommended to review its terms and conditions for staff so they better meet strategic needs.
28. AFBI should agree and implement a data management strategy that addresses both corporate and scientific data management needs and strive to push its level of maturity in data management to maturity level 3 in the next 18-24 months.

29. DAERA and AFBI must ensure appropriate and timely data sharing between the organisations in order to meet business need and maximise the value of data in achieving objectives and additionally that data sharing is considered fully and agreed during the commissioning process.
30. AFBI to establish a project to improve how it measures the impact of its research at Institute, programme and project level.

Governance Arrangements

31. DAERA and AFBI to implement Cabinet Office good practice on relationships with arm's length bodies.
32. DAERA to adapt the Assigned Work Programme so that it focuses on outcomes, with all associated processes such as commissioning, delivery, reporting and evaluation adjusted accordingly.
33. DAERA in conjunction with the AFBI Chair, to manage the size of the AFBI Board to align with Best Practice guidance, taking into account the complexity of its remit, with around 11 members.
34. DAERA in conjunction with the AFBI Chair, to ensure science expertise relevant to the agri-food and environment sectors in NI is represented on the AFBI Board.
35. DAERA and AFBI to seek to identify mechanisms to facilitate greater engagement at senior level.
36. DAERA should conduct a further formal review of AFBI in 2022.

Next Steps

With respect to communication of the findings to staff in AFBI and DAERA and external stakeholders, suitable briefing sessions will be arranged and undertaken.

Subject to Departmental approval, the AFBI Review Report will be published on the DAERA and AFBI internet sites in due course.

An Action Plan will be developed in response to the recommendations in this report. A workstream will be established in the Science Transformation Programme to govern, monitor and report on its implementation.

Acknowledgements

There were a range of people whose contribution to this process was very valuable. Particular thanks go to the science and industry representatives on the Project Board; the members of the Review Team and Subject Matter Experts within DAERA; the AFBI Executive Management Team and Governance Branch staff, who co-

ordinated actions within AFBI to support the review; as well as to all those who took the time to meet with the review team or respond to the call for evidence.

1. Introduction and Background

About AFBI

- 1.1. The Agri-Food and Biosciences Institute (AFBI) is an executive Non-Departmental Public Body (NDPB), sponsored by the Department of Agriculture, Environment and Rural Affairs (DAERA).
- 1.2. AFBI was established in 2006 under The Agriculture (Northern Ireland) Order 2004 which provides AFBI with the power to undertake scientific work in the fields of agriculture, animal health and welfare, food, fisheries, forestry, the natural environment, and rural development and enterprise.
- 1.3. The Institute exists primarily to provide DAERA with a range of statutory, analytical and diagnostic scientific services, research and development and an emergency response capability. It also serves the agri-food industry and wider community in a local, national and international context by delivering scientific services.
- 1.4. It is currently located on six specialised DAERA owned sites across Northern Ireland and one site leased by DAERA from a private landowner at Bushmills. In total the AFBI occupied estate comprises of 421 hectares of land and 37,000m² of laboratory, office accommodation and outbuildings.
- 1.5. AFBI's income from DAERA grant-in-aid in 2016/17 was £36.1m which accounted for approximately two-thirds of its total income. Funding amounting to £19.4 million was secured from a range of sources including DAERA, animal vaccine royalty income, grant funding from the EU, other public sector customers and the private sector. Thus AFBI's total income for 2016/17 was £55.5 million.
- 1.6. AFBI has downsized over recent years (21% reduction in staff numbers) via its Voluntary Exit Scheme and natural wastage. At 1 January 2018, AFBI had a staff complement of 593 FTE, of which 430 were scientific grade staff.

Aims of the Review

- 1.7. All UK public bodies are subject to periodic review to ensure they remain efficient, effective and accountable. In 2016, the Cabinet Office published new guidance for Departments¹ on which to base reviews of all arm's length bodies at least once every Parliament.
- 1.8. Guidance for Northern Ireland departments in 2008², advises that a NDPB should be reviewed regularly to consider whether it continues to be the best

¹ Tailored Reviews: Guidance on Reviews of Public Bodies, The Cabinet Office, November 2016

² Public Bodies: A Guide for NI Departments, Department of Finance and Personnel, 2008

way to deliver the services for which it is responsible, and if it is, how delivery of these services can be improved.

- 1.9. In this context and taking into account the fact that various reviews were undertaken on specific AFBI organisational issues in 2012-2013, DAERA committed to undertake a tailored review of AFBI in 2017.
- 1.10. DAERA intends that this review will be comprehensive, constructive and beneficial both to AFBI and to the Department.
- 1.11. It forms an important workstream within DAERA's Science Transformation Programme which has a vision of the science provided, managed and used by DAERA being innovative, collaborative and transformative. Additionally, DAERA will have the highest quality science staff, infrastructure and governance required to support a healthy and sustainable economy, environment and rural community and help deliver Programme for Government outcomes.

A summary of the Terms of Reference are as follows:

Form and Function

- 1.12. This will consider AFBI's position and its status as a DAERA-sponsored NDPB. It will provide a robust challenge to, and assurance on, the continuing need for AFBI – both its functions and form. It will consider:
 - AFBI functions, the need for them and its role as a Public Sector Research Establishment (PSRE)
 - Is a NDPB the most appropriate model?
 - Relationships between AFBI and other organisations
 - AFBI's Strategic Management
 - Potential impacts on AFBI functions of UK's exit from the EU

Efficiency and effectiveness

- 1.13. This will consider AFBI's capacity for delivering more effectively and efficiently, including identifying the potential for efficiency savings and where appropriate, its ability to contribute to economic growth. It will consider:
 - Recent audits
 - Procurement practices
 - Managing Income
 - Estate Management
 - Data Management
 - People Management
 - Contribution to economic growth

Governance

1.14. This will consider the control and governance arrangements in place to ensure AFBI and DAERA are complying with recognised principles of good corporate governance. It will consider:

- Corporate Governance
- AFBI Board Effectiveness
- Management of the Sponsor relationship

The full detail of the Terms of Reference for the Review is available at Annex A.

Process and Methodology

Governance of the review

1.15. The review was conducted by a small DAERA review team working under direction of a Project Board. The Project Board was chaired by the Head of Food and Farming Group in DAERA, who was the Senior Responsible Owner (SRO) for the review.

1.16. The Board consisted of representatives from within and outside DAERA, to provide a balance between internal knowledge and experience and independent, relevant expertise. Membership was as follows:

- Senior DAERA User of AFBI(x2)
- AFBI CEO
- DAERA Science Transformation Programme
- External Senior Research Commissioner
- External Senior Science Expert (x2)
- Senior Industry representative
- Independent DAERA Board Member

1.17. The Project Board directed the review and approved the Review report for consideration by the Department. Details of the membership of the review team and Project Board are set out at Annex B.

Methodology

1.18. There were three evidence-gathering phases to the review which ran from June 2017 until April 2018. The first considered relevant written evidence, provided by AFBI and DAERA in line with the Terms of Reference. The second phase, facilitated through an online call for evidence questionnaire, collated and considered views from a wide spectrum of stakeholders, including DAERA staff who use AFBI services; businesses / organisations that use AFBI services; academic institutions; and anyone who wished to

share their views on AFBI or how DAERA meets its science needs. The third and final phase was a series of one to one interviews with DAERA and AFBI staff and external stakeholders. The topics covered in these interviews were informed by the emerging findings from the first two phases of the review. Focus Groups were also held with groups of DAERA and AFBI staff to consider PRSE issues. There were 92 respondents to the questionnaire and 48 interviews conducted. Lists of call for evidence respondents and stakeholders interviewed is available at Annex C and a summary of the on-line questionnaire findings is provided at Annex D.

1.19. In addition, discrete subject areas were identified, which required specific expertise and focus. Business Consultancy Services, a unit operating as part of Public Services Reform Division in the Department of Finance (Northern Ireland), was engaged to provide independent consideration of:

- Funding model options (Annex E)
- Effectiveness of the AFBI Board (Annex F).

2. AFBI's Roles and Relationships

AFBI's Functions

- 2.1. Under the Agriculture (NI) Order 2004, AFBI can undertake scientific work in the following areas:
- agriculture;
 - animal health and welfare;
 - food;
 - fisheries;
 - forestry;
 - the natural environment; and
 - rural development and enterprise.
- 2.2. AFBI delivers four key functions for DAERA. These are Research and Development (R&D), analytical and diagnostic testing, specialist advice and emergency response capability.

Does DAERA have a need for the functions AFBI performs for it?

- 2.3. To assess whether all the functions and sub-functions AFBI delivers for DAERA are needed, AFBI was asked to define all the sub-functions it undertakes for DAERA. DAERA Directors whose areas of responsibility use AFBI services, were asked to consider these and confirm which sub-functions were used and needed now and over the next 5 years by their Division. In total 177 different sub-functions were identified. The analysis confirmed that all but 2 are needed by DAERA. A summary of the analysis is outlined in Annex G.

Is a NDPB the most appropriate model?

Role and Delivery as a Public Sector Research Establishment

- 2.4. Being content that the vast majority of the functions delivered by AFBI for DAERA are required, the Review considered whether the existing model of delivery is still appropriate. This was taken forward, taking account of the 'tests' for delivery at arms-length (as detailed in the Terms of Reference, Annex A) through two focus groups with DAERA and AFBI staff using the framework for review of PSREs as outlined in the Cabinet Office guidance for Tailored Reviews¹. The online questionnaire and one-to-one interviews also sought views on whether the functions currently delivered by AFBI needed to be undertaken:

- by a public sector research establishment
- in Northern Ireland
- in a single organisation
- by a non-profit making organisation

By a public sector research establishment?

- 2.5. From the large number and wide range of science sub-functions referenced above, it is clear that DAERA requires a significant volume of science services to support its operation. The greatest demand is for diagnostic and analytical science services which underpin many of the statutory monitoring and surveillance responsibilities of DAERA. DAERA also has a need for science evidence to underpin its policy evaluation and development. Further, to support the achievement of its objectives (Annex H), there is a need for DAERA to commission R&D across the full remit of its responsibility.
- 2.6. The balanced view of interviewees was that DAERA needed a PSRE to deliver the science services required locally. Some issues were of particular importance, such as the need for key emergency response capability and the underpinning of international trade in NI agri-food products. Interviewees also considered some of the low volume / high complexity assessments DAERA required would not be viable or attractive for a commercial provider. As DAERA's PSRE, AFBI is required to prioritise DAERA's work over that of other users and this is considered important to ensure DAERA's statutory requirements for science evidence are met in a timely way.
- 2.7. Independence from Central Government was valued in assuring the objectivity of the science results produced. It was also seen as important, particularly by external stakeholders, that AFBI had the autonomy to dissent from and criticise Government policy, where this was warranted.

In Northern Ireland?

- 2.8. There was a view across all interviewee groups that where location has a strong bearing on the quality and relevance of the work to the department and / or the local agri-food and environmental sectors, it was important this work was undertaken in Northern Ireland. Examples of such work included emergency response capability for areas of critical importance to NI, such as livestock; agri-environmental science and biodiversity for which knowledge of local environmental conditions is essential. Significant practical, logistical constraints also were considered a reason why some work needed to be undertaken locally. However, not all science used by DAERA or the local agri-food and environmental sectors needs to be undertaken in NI for it to be

relevant. To make optimal use of the science resources available here, it was considered important for AFBI to work in collaboration / co-operation with other science providers to avoid duplication and add value through building on the science done elsewhere.

In a single organisation?

- 2.9. As outlined above, AFBI delivers over 170 different sub-functions for DAERA in support of the Northern Ireland agri-food and environment sectors. These cover a wide range of scientific disciplines. Across the interview groups, there was a view that the current suite of functions was very wide and that if AFBI were to concentrate on a smaller number of key areas where local delivery of services is a requirement for DAERA and where it is or could be internationally relevant, there could be benefits for both AFBI, DAERA and the relevant sectors.
- 2.10. AFBI delivers diagnostic and analytical science services and R&D for DAERA. Across the interview groups there was good agreement that the synergistic combination of capacity and capability required for these services provided DAERA and NI with a more effective Emergency Response Capability.
- 2.11. Finally, it was recognised that there can be synergies and benefits when services are delivered in a single organisation, which can help support a Grand Challenge or cross-disciplinary approach to addressing industry problems.

By a non-profit making organisation?

- 2.12. While the balanced view across the interviewee groups was that a PSRE was needed, it was recognised that Government funding will continue to be under pressure and that to maintain and develop its operation and services, it was important that AFBI developed other income sources.
- 2.13. It is possible for a PSRE to have sources of income other than Grant in Aid. However, interviewees also recognised the value of having a public-service ethos in the department's main science provider and many cautioned that there was a need for a balance so that this ethos prevailed.
- 2.14. As a NDPB, AFBI is required to comply with the Department of Finance, Managing Public Money (MPMNI) guidance. AFBI considers this is a constraint on exploring potential externally funded science opportunities. Additionally, as a NDPB, AFBI is not eligible to apply for UK Research and Innovation funding as a lead scientific body. As a public body, AFBI faces a number of constraints on exploring potential science opportunities. Under the

general powers of the Institute as listed in the Agriculture (Northern Ireland) Order 2004, AFBI can form or participate in the formation of companies. This may afford AFBI the potential for arrangements more congruent to the exploration of some science opportunities. Any such development would be subject to approval by DAERA and the Department of Finance. Consequently, such a development would need to be supported by robust arguments clearly outlining the costs and benefits; and how such a development would be underpinned by appropriate governance arrangements.

- 2.15 To summarise, NDPB status meets DAERA needs and stakeholders were largely comfortable with the current status. Being a NDPB enables AFBI to access some external funding. There are some funding streams which it cannot access directly, but this can be achieved through partnering with other institutions. AFBI has raised some concerns around the suitability of NDPB status, which should be explored further.

Recommendation 1

The Review confirms the principle that to obtain the objectivity required and valued by the Department and industry, DAERA's science services should continue to be delivered at arm's length from the Department.

Recommendation 2

DAERA should conduct an economic appraisal of the arms' length model taking account of the review outcome that a NDPB is the best model for the delivery of science services.

Recommendation 3

AFBI could consider the appropriateness and benefits of establishing a discrete company that may better facilitate the exploration of potential science opportunities.

Linkages

Knowledge Generation and Knowledge Dissemination

International Comparators

- 2.16 To inform our thinking on how responsibilities for knowledge generation / knowledge dissemination can be brigaded, a high level comparison with models in other regions was undertaken. The comparators identified by both DAERA and AFBI were: SRUC, Teagasc, Wageningen and APHA (Annex I). The key finding from this comparison was that DAERA has adopted a model which differs to arrangements in most other regions by brigading diagnostic

and analytical functions alongside R&D, but discrete from knowledge transfer. In three of the four comparators, R&D, learning and knowledge transfer is either brigaded into a single organisation or actions are being taken to strengthen the collaboration between different organisations.

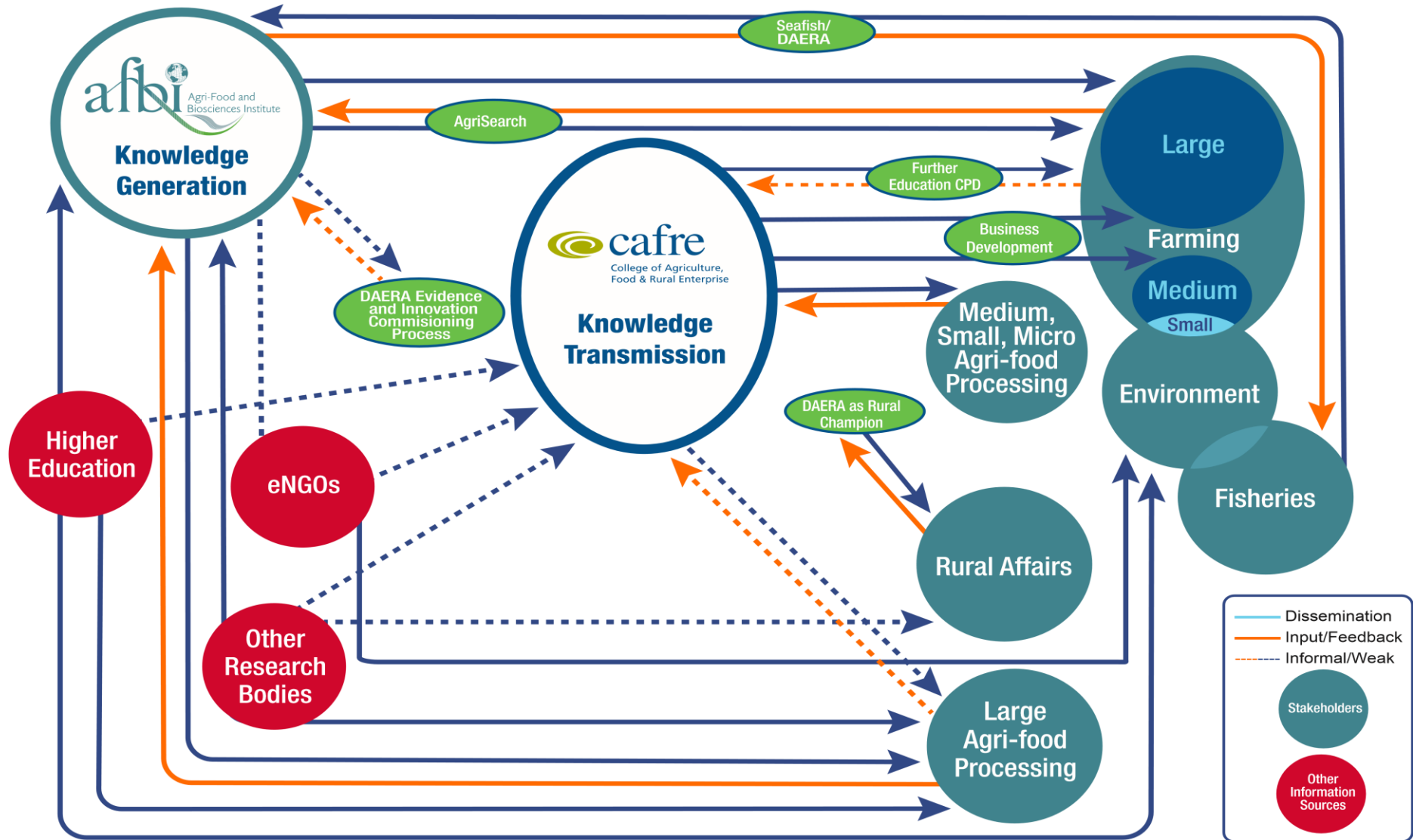
Table 1: A summary of the brigading of Diagnostic and Analytical, Research and Development and Knowledge Transfer functions in comparator organisations.

NI	GB	Scotland	Ireland	Netherlands
AFBI	APHA	SRUC	Teagasc	WUR
D&A and R&D together	D&A and R&D together	R&D and KT together	R&D and KT together	R&D and KT together
KT separate	KT separate	Contributes to D&A	Contributes to D&A	Contributes to D&A

Knowledge Generation / Knowledge Dissemination Model

- 2.17. DAERA has an objective to ensure that the NI agri-food and environment industry is aware of new developments relevant to the sectors and that new understanding, techniques and skills which support competitiveness and sustainability in the sectors are transferred effectively. The Departmental Vision and Strategic Outcomes are outlined in Annex H.
- 2.18. The knowledge generation that DAERA funds through AFBI science services and the knowledge exchange / technology transfer (from now on in this report referred to collectively as knowledge exchange) actions that DAERA funds largely through its College of Agriculture, Food and Rural Enterprise, (CAFRE) are key mechanisms through which DAERA fulfils this role. CAFRE's roles and responsibilities are outlined in Annex J.
- 2.19. As Diagram 1 indicates, the current knowledge generation and knowledge dissemination process is extremely complex. Based on evidence submitted to the Review, it includes several weak links, particularly between DAERA and AFBI during the evidence and innovation commissioning process and between CAFRE and larger agri-food processors. The evidence demonstrated even greater weaknesses in the current model in the absence of any formal relationship between AFBI and CAFRE on arrangements for technology transfer.

Diagram 1 - How we see the current Knowledge Generation and Knowledge Exchange process



- 2.20. The effectiveness of AFBI's links with other organisations has a critical bearing on effectiveness of both the knowledge generation and the exchange of that knowledge and thus on the achievement of DAERA objectives for the agri-food and environment sectors.

Links between AFBI and CAFRE

- 2.21. There was broad consensus across most DAERA, AFBI and external stakeholder interviewees with knowledge of the mechanism used by DAERA for knowledge generation and exchange to the agri-food and environment sectors, that while all the appropriate building blocks are available, the current arrangements for communication, collaboration / co-operation between different organisations do not maximise the interaction and collaboration between knowledge generation and knowledge dissemination. This weakness limits the effectiveness of these functions and reduces the potential for DAERA to optimise the value of its investment in each. This issue was considered to impact particularly on the effectiveness of promoting innovation in the agri-food and environment sectors from research.
- 2.22. Many considered the optimal solution was to bring all the functions together in a single organisation. However, the remits of AFBI and CAFRE are not fully complementary and amalgamation would not resolve all issues and would create others. It would also involve significant disruption. A more measured approach of establishing formal systematic linkages may be effective and could be delivered faster. This should be progressed in the first instance. The next review could consider the impact of this change and consider whether a wider review is necessary.
- 2.23. Both AFBI and CAFRE have critical roles to play in the end to end knowledge generation / exchange process, however, there were blurred lines with respect to some roles and responsibilities, which at times resulted in the organisations being perceived as working in competition rather than in co-operation with each other. On examination of the linkages to facilitate the knowledge exchange process that existed between AFBI and CAFRE, these were considered largely informal. There is a need to establish stronger, formal communication and co-operation channels between AFBI and CAFRE to assure effective co-operation on science, research, vocational education and knowledge exchange.

Recommendation 4

The Knowledge Framework must implement its planned effective and flexible knowledge exchange arrangements (which set out the roles for key actors

such as AFBI and CAFRE while encouraging appropriate engagement of others) with ongoing evaluation and regular review of this process.

Links between AFBI and DAERA and other Departments

- 2.24. AFBI was established as a NDPB to deliver the science service needs of the former DARD. DARD established appropriate arrangements to govern the commissioning of work from AFBI (see Sponsorship Management section). They also included the development of an Evidence and Innovation Strategy and implementing Programme Management Board arrangements to govern the identification, prioritisation, commissioning and evaluating of R&D. In addition to the work undertaken for DARD, AFBI also undertook work for the former Department of the Environment and the Department of Culture, Arts and Leisure relating to marine and fisheries. Since the rationalisation of government departments in Northern Ireland in 2016, such functions are now delivered for DAERA through a combination of AWP and service level agreements (SLA)s. AFBI also participates in the Department for Infrastructure's marine and freshwater groups; provides advice to the Department of Enterprise on marine licensing; and guidance to the Department of Health on agricultural pesticides and zoonoses. In general the science work undertaken for these departments is governed through SLAs.
- 2.25. Separately funded work is also undertaken for the Food Standards Agency and a number of other NDPBs and North/South bodies including NI Water, Invest NI, Livestock and Meat Commission, Loughs Agency and the Irish Lights Commission and these are managed through SLAs.

DAERA's governance arrangements for Knowledge Generation and Knowledge Exchange

- 2.26. In April 2016, DAERA was established. This new department incorporated the former DARD (with the exception of Rivers Agency), the Environment and Marine Group from the former DOE, Inland Fisheries from the former DCAL and the Sustainability Strategy from the former OFMDFM.
- 2.27. This review has identified that, while there has been some adjustment to the governance arrangements that existed prior to the formation of DAERA these are not complete. The Department has developed a Knowledge Framework (KF) and created the Knowledge Advisory Service (KAS), to bring greater strategic focus and alignment to knowledge exchange to industry.

- 2.28. While governance oversight for R&D commissioning is in place, a similar mechanism to govern diagnostic and analytical services is not.
- 2.29. It was considered important that a policy for knowledge exchange covered the full science remit (diagnostic & analytical and R&D); that this issue was considered and determined at the science commissioning stage and delivery organisations commissioned to deliver.
- 2.30. There was a view, particularly with DAERA and AFBI interviewees, that DAERA had a capability gap in its role of “intelligent customer” in the commissioning of certain R&D (principally relating to the innovation agenda). An effective “intelligent customer” role was considered to involve better integration of stakeholder engagement, R&D and knowledge exchange commissioning and evaluation of effectiveness and impact.
- 2.31. There are examples of good practice in other organisations, such as in the NDPB, Seafish and the Agriculture and Horticulture Development Board (AHDB) and these could be considered when developing an effective “intelligent customer” approach for DAERA. Typically, such roles involve building strong relationships with research providers, knowledge translators and industry users to create effective and functional sectoral networks to inform, direct and make best use of all relevant research available to accelerate productivity.
- 2.32. On a minor point, the terms knowledge transfer, technology transfer and knowledge exchange were used, sometimes interchangeably by different people and it was not clear whether they referred to the same or different things. It would be useful to define the terms. The term “transfer” implies a unidirectional flow of information, where “exchange” involved two or multi-way flow of information, which facilitates more effective learning / innovation.
- 2.33. See also “Collaboration with other science organisations” in the Science Quality section.

Recommendation 5

DAERA must ensure it establishes, invests in and implements a model that better facilitates appropriate input from its stakeholders and AFBI, to enable it to perform better as an intelligent customer that can identify, prioritise and articulate its current and future diagnostic, research and wider science requirements in a strategic context.

Quality of Science

Scientific “Standing”

- 2.34. The science outputs AFBI produces for DAERA underpin many of its statutory requirements; the development and evaluation of Government policy; trade in NI agri-food products; and the effectiveness of the Department’s emergency response to animal and plant disease outbreaks. The robustness of the quality of the science undertaken is therefore an important factor for DAERA. This is dependent on the “standing” of AFBI scientists leading the work and the reputation of AFBI itself as a science organisation.
- 2.35. The dominant view of interviewees was that DAERA needed science undertaken by scientists with nationally and sometimes internationally recognised “standing”. It was recognised that to achieve and maintain this level of standing scientists needed to engage in a range of activities such as publication of their work in quality peer-reviewed journals, make presentations of papers at national and international conferences, collaborate with other research organisations and have good success rates for external funding bids.
- 2.36. Assurance of scientific standing was considered a pre-requisite for commissioning of work from a science provider. AFBI has developed and implemented its own peer-review process involving external assessment of science quality. This provides some assurance to DAERA, other customers and the Institute itself of the quality of its work, however it does not include benchmarking with other providers, does not conform to a recognised methodology and is not published. Further assurance can be provided through reporting on performance management measures for scientists relating to standing and collaboration with others as well as through external benchmarking of scientific quality using a recognised model such as Research Excellence Framework (REF), the UK’s system for assessing the excellence of research in higher education institutions. The use of a recognised external benchmarking model will also facilitate AFBI to raise the visibility of its science quality nationally and internationally.
- 2.37. It was considered important that AFBI keeps developing its science expertise to maintain its relevance as a science organisation. DAERA science needs are largely for diagnostic and analytical services and R&D to underpin policy and innovation. These by their nature can be discrete and applied pieces of work, which do not facilitate scientists developing expertise which can result in “standing” reinforcing actions. By implementing a more formal programme-based approach to commissioning, DAERA could assist AFBI in its long-term planning and in developing complementary research initiatives of a more

basic nature funded through other mechanisms. This should also facilitate the development of its scientists' expertise.

- 2.38. In 2016/17, DAERA recognised that a degree of freedom was needed to be creative and excel in science and established the AFBI Directed Research Fund to address this issue. However it is not clear how effectively it has been targeted by AFBI at priority areas to date.

Recommendation 6

DAERA must ensure the science services it commissions are delivered by nationally and internationally recognised scientists working in the disciplines relevant to the science being requested.

Recommendation 7

DAERA should commission science from the most appropriate provider in terms of mitigating risk, obtaining quality, delivering efficiently and meeting DAERA's needs effectively.

Recommendation 8

DAERA should implement a more programme-based approach to science commissioning, which allows AFBI to take a longer term view when investing in the future and develop complementary research initiatives.

Recommendation 9

AFBI must use the AFBI Directed Research Fund (DRF) in accordance with priorities and governance agreed with DAERA and DAERA must ensure that the conditions associated with the DRF have been met before funding is released.

Securing and Retaining Scientific Talent

- 2.39. AFBI was generally seen as a good place to work by its employees but this was influenced by area of work, stage in career and personal circumstances. This is reflected in the view of some interviewees that the staff turnover rate is lower than that experienced in other sectors (although very low levels of turnover can lead to stagnation and restrict opportunities for professional career development). AFBI and external stakeholder interviewees advised that AFBI scientists have a good relationship with industry and that the problem-solving nature of the roles is attractive to some scientists. It was also recognised that a higher recognition for AFBI as an organisation that produced good science would increase its attractiveness to good scientists. Some interviewees indicated that AFBI terms and conditions of employment

may not sufficiently incentivise excellent scientists to choose AFBI over other institutions or NI over other locations, particularly at more senior levels.

- 2.40. Most of the AFBI interviewees referred to the high administration burden associated with their roles. Better corporate systems could reduce this and improve scientists' job quality and facilitate them having more time to dedicate to science activities. This is addressed more fully in the section on efficiency and effectiveness.
- 2.41. It was also recognised across all interviewee groups that there was a dropping off of the number of PhD students undertaking research at AFBI from earlier years and there was a need to address this issue. Given the potential disincentive of NI as a location, it was considered important to target increasing the numbers of "home-grown" PhD students, particularly those with training in related fundamental science disciplines.

Recommendation 10

AFBI should establish appropriate strategic collaborations with universities to ensure direct involvement in the delivery of PhD and post-doctoral programmes.

Recommendation 11

AFBI should consider establishing its own studentships to progress its research agenda and help develop a wider pool of potential scientists for future recruitment.

Collaboration with other science organisations

- 2.42. Written evidence provided by AFBI demonstrates that AFBI has links with local universities, UU and QUB, in bacteriology, virology and disease surveillance. These are predominantly at operational level, are aimed at (inter alia) developing innovative working practices and high throughput technologies.
- 2.43. In addition, AFBI's Bacteriology Branch has extensive scientific linkages and active collaborations with other centres of excellence across the UK and Ireland in R&D and statutory diagnostic and analytical functions, particularly in the areas of bovine TB and Campylobacter. AFBI collaborates and amalgamates data with DAFM to produce the annual all-island disease survey report and has links for emergency responses actions with APHA, Fera, Pirbright, FSA and the various relevant EU Reference Labs.

2.44. As identified previously with respect to whether DAERA's science work needs to be undertaken in NI, to make optimal use of the science resources available here, it was considered important to work in collaboration / co-operation with other science providers to avoid duplication and add value through building on the science done elsewhere. It has also been identified that collaboration with others is an important activity in developing and maintaining scientific "standing". Both written and interview evidence confirm AFBI researchers actively engage in collaboration with scientists in other organisations. Interviewees indicated there was potential for collaboration with others to yield greater benefit for AFBI and maximise AFBI's diagnostic and analytical and emergency response capability services to DAERA. While it is understood that researcher collaboration is topic-specific and is only relevant where there is mutual interest and benefit for all parties, it was also recognised that institutional direction to co-operate could strengthen collaboration and the benefits derived from it, such as enhancement in reputation for both the scientist and AFBI. This may also facilitate access to REF review that could contribute to benchmarking and the wider recognition of the quality of AFBI's research and the standing of its scientists. It was considered important that AFBI should seek to build an appropriate range of strategic alliances in its priority areas of science.

Recommendation 12

AFBI should build on existing alliances with relevant organisations consistent with DAERA science priorities.

Strategic Management

Direction from DAERA

2.45. In the first instance it was important to understand what DAERA was asking of AFBI as its NDPB. While there is a significant level of governance and process around how the organisations interact, there was more limited strategic direction from DAERA on what its science priorities were. Evidence and Innovation Strategies had been defined by the former DARD for the periods 2009-2013³ and 2015-17⁴. These focused on R&D and did not address diagnostic and analytical science services, which is the greater proportion of the work undertaken by AFBI for DAERA. These services are commissioned on an annual basis and while these vary little from year to year, there is no strategic underlying statement relating to this aspect of DAERA's science agenda. The Review Team did not see strategic documents addressing the science priorities relating to the science work from the former DOE and DCAL. As a new department, DAERA has not defined an

³ DARD Evidence and Innovation Strategy 2009-2013

⁴ DARD Evidence and Innovation Strategy Updated for 2015-2017

overarching science strategy which outlines its science priorities. It is considered important that this is done as a priority as it is a limiting factor on AFBI's complete understanding of what DAERA requires of it.

- 2.46. The Review considered the level of engagement between DAERA and AFBI in the development of respective strategic plans, such as corporate plans and science strategies. Interview evidence from DAERA and AFBI staff identified this was limited. Where it happened, it involved consideration of written plans, rather than active engagement of relevant representatives in the development process. Cabinet Office guidance⁵ outlines the value that can be derived from engagement with ALBs in strategic planning. This is particularly valuable in clarifying and defining the roles ALBs can play in the delivery of the parent department's strategic objectives and ensures good alignment of the ALB's objectives with those of the department.

Recommendation 13

DAERA must put in place a process to provide better high level strategic direction to AFBI that clearly outlines its long, medium and short term priorities.

AFBI Strategic Planning

- 2.47. At the start of this review, the Vision 2020 Strategy was the active strategic plan for AFBI. This was a plan developed in 2015, which outlined the tactical changes that needed to be made to live within budget during a period of reducing DAERA funding. It was not considered to reflect good practice in strategic planning and provided only a partial solution to the challenges facing AFBI at that time.
- 2.48. Through the period of the review, AFBI has been engaging in the development of its draft 2018 – 2022 AFBI Corporate Plan, which reflects a step-change improvement in strategic planning. AFBI has also initiated the development of a 10-year science strategy. These developments are encouraging and as has already been identified for DAERA strategy development, given AFBI's main role is science services provider to DAERA, could be enhanced further through better engagement between AFBI and DAERA in the strategy development process.
- 2.49. A good strategic plan should be based on an analysis of the current situation; a vision for what can be achieved over the timeframe of the Plan, translated into priorities and objectives which address the gap between the status quo and the future Vision. The plan should inform or link to associated operational plans which guide how AFBI will use the resources at its disposal to support delivery of these objectives.

⁵ Partnerships between departments and arm's-length bodies: Code of Good Practice, Cabinet Office, February 2017

2.50. In the section of this Review which considered whether a NDPB was the most appropriate model, consideration was given to whether all the functions which AFBI currently delivers needed to be delivered in one organisation. The view across the interview groups was that the current suite of functions was very wide and that if AFBI were to concentrate on the key areas where local delivery of services is a requirement for DAERA and where it is or could be nationally and internationally relevant, there would be benefits for both AFBI and DAERA.

2.51. Through this Review, issues raised by interviewees which should be considered by AFBI in the development of its strategies include that:

- AFBI should define a Return on Investment objective in its Corporate Plan, including in terms of public good;
- the use of the AFBI Directed Research Fund should be planned more strategically, targeting its use at its science priority areas; and
- external stakeholders' aspiration for more sector specific and targeted communications could be addressed through the development and implementation of a Stakeholder Engagement Strategy.

Recommendation 14

AFBI must engage better with the Department and articulate clearly its scientific and strategic ambitions and how these complement those of DAERA.

Recommendation 15

AFBI's science strategy must reflect and link to DAERA's strategic science priorities.

Recommendation 16

AFBI must identify and concentrate on specific areas of expertise, engaging in activities that underpin its national and international science standing.

Recommendation 17

AFBI must improve and better target its communication with stakeholders to increase the relevance and value of its communications to end users, while raising the organisation's profile.

UK Exit from the EU

2.52. AFBI provided a written analysis on the potential impacts of the UK exit from the EU on each of its functions considering the implications for access to skilled workers, and their current work or roles which are dependent on EU

membership. This assessment reflects that AFBI has given consideration to this issue and is a good start on which to build further plans.

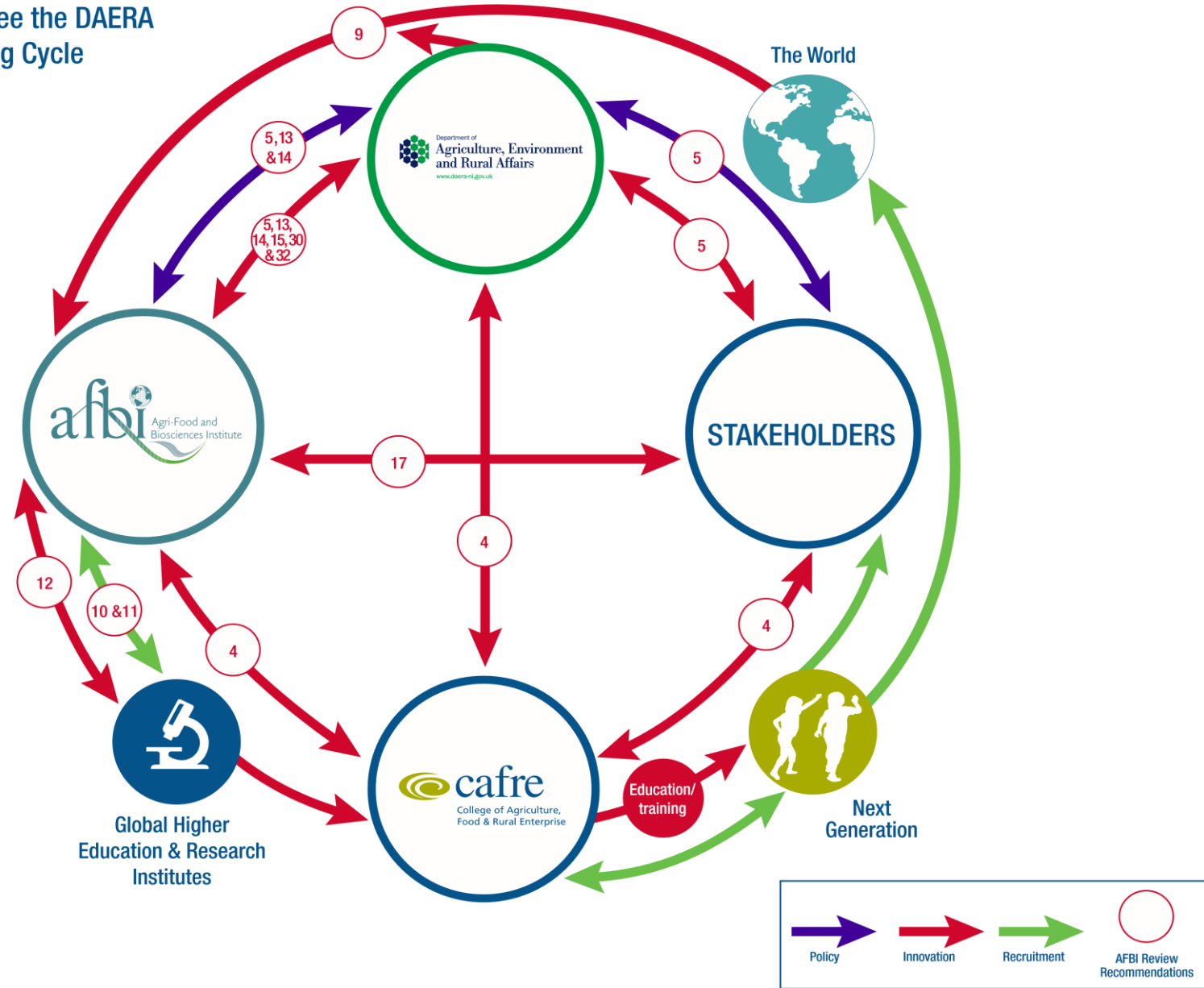
Summary

- 2.53. DAERA requires the functions undertaken by AFBI and a local Public Sector Research Establishment (PSRE) is valued for science services that need to be delivered in Northern Ireland.
- 2.54. With respect to an organisational model, at this stage a Non-Departmental Public Body (NDPB), is considered likely to be the most appropriate, but this needs to be tested through business case analysis. However, the financial arrangements associated with NDPB status can place constraints on AFBI exploring potential externally funded science opportunities. The Agriculture (NI) Order 2004 provides AFBI with the power to form or participate in the formation of companies and while additional, appropriate permissions and governance arrangements would be necessary, AFBI could explore whether the development of such a company might be worthwhile.
- 2.55. DAERA has a responsibility to support the sustainability and competitiveness of the agri-food industry and to protect and enhance the natural environment in NI. Knowledge generation and exchange are key policy instruments in this regard in which AFBI plays a critical role.
- A clearer definition of the roles of all parties, including AFBI's would be beneficial.
 - In the commissioning of knowledge generation, early consideration should be given to how the knowledge will be disseminated.
 - There is a need for a better "intelligent customer" role, including enhanced stakeholder engagement which can effectively articulate DAERA's current and future diagnostic, research and wider science requirements in a strategic context.
- 2.56. The Review has identified that DAERA requires its science undertaken by scientists with nationally and internationally recognised "standing", to underpin the quality of its monitoring and surveillance functions and the assurance necessary for trade of NI agri-food products. It is necessary that it commissions science of this quality from the most appropriate provider. Where AFBI can demonstrate its science is of the requisite quality and can be delivered when needed, it is likely that AFBI will continue to be the main provider of science services for DAERA. However, AFBI's current suite of functions is very wide and it may be better for it to concentrate on key areas where local delivery of services is a requirement for DAERA and where its science is internationally relevant. AFBI also needs to take action to

strategically build on its existing collaboration with other research organisations to continue to enhance the quality and visibility of its science and to continue to attract good scientists.

- 2.57. It is important that DAERA provides AFBI with a better line of sight of its strategic direction (and vice versa). This will facilitate greater understanding of what is required by its parent department and facilitate better strategic planning by AFBI. AFBI is already moving to improve its strategic planning and this can be enhanced through better engagement with DAERA.
- 2.58. Recommendations 4-5, 9-13 and 17 are relevant to the DAERA science commissioning cycle shown in Diagram 2.

Diagram 2 - How we see the DAERA Science Commissioning Cycle



3. Effectiveness and Efficiency

3.1. The review considered written evidence on the range of issues outlined in the Efficiency and Effectiveness section of the Terms of Reference methodology (Annex A). Where arrangements were considered to reflect good practice, there was no further consideration of the issue. The issues taken forward for consideration, including through stakeholder interview are as follows:

- Service Quality
- Value for Money
- Estate Management
- People Management
- Data Management
- Contribution to economic growth

Service Quality

- 3.2. In general, customers considered the science services which AFBI delivered met their needs and that staff provided very good customer service. The quality of the science delivered was valued highly. A range of examples of good practice was highlighted across food, microbiology, agriculture, marine, economics and environmental science functions. It is clear that AFBI staff work hard to deliver services to customers.
- 3.3. However, respondents to the online questionnaire and interviewees also raised some concerns about the timeliness of product delivery. Customers expect their needs will be fulfilled within a reasonable time period and were sensitive to instances where work was not started immediately on receipt of sample material, or an “office-hours” culture meant results were not provided in the shortest time possible. It was identified that AFBI sometimes had difficulty in ramping up capability quickly to address customer needs.
- 3.4. There were also some instances cited by DAERA where AFBI was reticent to accept proposed specifications, where these did not fit within existing science programmes of work or expertise. These issues may be addressed by DAERA commissioning science from the most appropriate provider.
- 3.5. AFBI interviewees identified the considerable bureaucratic burden that operating AFBI corporate systems presented to them in undertaking their work. Like any NDPB in NI, the monitoring and reporting requirements for AFBI have to align with DoF guidance for arm’s-length bodies⁶. (This Review has considered these arrangements and has confirmed that this is the case). It is important that AFBI implements corporate support systems that can

⁶ Managing Public Money Northern Ireland

facilitate meeting these requirements in a timely way. Ensuring these are as easy to use as possible will reduce the bureaucratic burden on scientists. This would improve consistency of timely fulfilment of customer needs and release more time for doing science, improving job satisfaction for scientists.

Recommendation 18

As a top priority, AFBI must review its corporate support systems and financial processes, identify gaps and take action to ensure that they are fit for purpose with respect to delivering timely information to enable effective control in all relevant areas.

Value for Money

- 3.6. There was a spectrum of views expressed across the customer interviewee groups on the value for money provided by AFBI services. Some considered this was very good, others considered it expensive, resulting in some cases the use of alternative providers. It is important for AFBI to demonstrate to customers the value for money their services represent. This can be achieved through benchmarking quality and cost for comparable services from other providers and a clear focus on driving ongoing efficiency gains.
- 3.7. As a NDPB, AFBI is required to comply with Managing Public Money NI guidance. This requires that services are provided at Full Economic Cost. The cost assigned to a service will be the sum of the direct cost of undertaking the work plus a proportion of the overheads of the organisation. Key issues raised with the Review team on this issue were the very high overhead rate within AFBI; and a lack of transparency about how these are calculated / apportioned to services.
- 3.8. Overhead costs include administration and estate costs. To optimise value for money it is in AFBI's interests that these are as low as practical.
- 3.9. With respect to lack of transparency, one aspect relates to use of the AFBI Strategic Cost Model, which can alter the costs of post-commissioned services in-year. This causes confusion for DAERA staff and undermines confidence in the value for money of services. A further aspect is the use of funding provided for commissioned R&D which is not completed in-year as planned. There needs to be more transparency on how this funding is utilised.
- 3.10. How DAERA funds AFBI is influential to what needs to be considered as an overhead cost. Business Consultancy Services undertook a project to examine this issue and to recommend options which may better reflect DAERA's requirements (Annex E). This has identified that DAERA should

investigate a funding model for AFBI, based on core funding for costs deemed essential and transactional funding for commissioned work. Directed Research funding could also continue to be available to AFBI, subject to compliance with governance processes agreed with DAERA (as per Recommendation 9).

3.11. Many AFBI interviewees considered lack of End of Year Flexibility (EYF) was a constraint on AFBI managing its funding streams. (EYF is the ability to carry uncommitted funds over from one financial year to the next). In NI government accounting, this is strictly controlled at Block level only and there is no scope for EYF for AFBI.

3.12. A further contributing factor to the bureaucratic burden identified by AFBI scientists was the detailed level at which DAERA requires oversight of how AFBI spends its funding. A review of and adjustment to the Annual Work Plan (AWP), and associated processes could seek to focus on the achievement of outcomes rather than activities.

Recommendation 19

AFBI and DAERA must refine systems and processes needed to provide stronger assurance to DAERA on quality and value for money provided by AFBI.

Recommendation 20

DAERA must identify appropriate Key Performance Indicators that demonstrate the level of achievement of appropriate outcomes and value for money.

Recommendation 21

If AFBI remains a NDPB, DAERA should investigate a funding model for AFBI based on core funding for costs deemed essential and transactional funding for commissioned work.

Recommendation 22

DAERA needs to consider how transactional funding is provided on a programme basis linked to higher level strategic outcomes, rather than the current emphasis on detailed aspects of delivery.

Recommendation 23

DAERA must consider how to achieve greater transparency on how the R&D budget in AFBI is spent.

Recommendation 24

AFBI should review its fees and charges with DAERA in the context of a revised funding model, ensuring any proposed changes continue to be compliant with Managing Public Money NI.

Estate Management

- 3.13. The AFBI organisation is currently located across 7 specialised sites. AFBI's current Headquarters site is located at Newforge Lane, Belfast with other sites being located at Bushmills, Crossnacreevy, Loughgall, Stoney Road Belfast (Stormont), Hillsborough and Omagh.
- 3.14. With the exception of the Bushmills site, the AFBI-occupied estate is owned by DAERA, which is currently AFBI's landlord under the terms of a lease between both organisations. All capital investment in the AFBI-occupied estate falls under the remit of DAERA to take forward in close conjunction with AFBI.
- 3.15. Much of the AFBI occupied estate is reaching the end of its useful life. In 2016, a paper to the AFBI Board proposed significant development of the estate it uses, costing approximately £100million. This includes rationalisation, reconfiguration, modernisation, the transfer of functions between sites and the need to dispose of a range of assets no longer required once modern, fit-for purpose facilities are developed.
- 3.16. AFBI estate related overheads in 2016/17 were around £10m. This included £4m on rent and approximately £2m on maintenance costs. These costs represent a significant overhead for AFBI, adding to the cost of its services. They also represent a significant financial burden for DAERA. The high costs of AFBI related to the estate were identified in an NIAO report⁷ and subsequently discussed by the Public Accounts Committee (PAC) in 2014⁸. The PAC identified the implementation of more efficient accommodation solutions for AFBI had been unacceptably delayed. While there are plans to address the issues with the estate, the pace of progress is slower than planned, which results in continuing inefficiencies.
- 3.17. There are a lot of "players" involved in estate management. This includes Central Properties Division in DoF, Finance Division and AFBI Sponsor Branch in DAERA and AFBI. The involvement of different business areas constrains timely decision making.

⁷ The Agri-Food and Biosciences Institute Report by the Comptroller and Auditor General, 12 September 2013

⁸ Northern Ireland Assembly Public Accounts Committee Report, NIA 162/11-15, 26 February 2014.

- 3.18. This review has highlighted a number of issues. AFBI needs to have an estate that is fit for purpose to support its work. It is currently too large and too costly. Current estate management is not responsive enough to AFBI's needs. Decisions on estate rationalisation appear to lack sufficient pace and urgency and maintenance lead times can be very long, with the result that AFBI service delivery can be impaired. If AFBI owned the estate, it would have greater autonomy over its development and a greater incentive to ensure it is right-sized and configured to minimise costs while delivering against needs. There is a need to shorten decision-making chains and bring decision-making closer to where its impact is felt.

Recommendation 25

As a priority, DAERA should conduct an economic appraisal for the transfer of the science estate to AFBI.

People Management

- 3.19. AFBI has a Staff and Organisational Improvement Plan, developed as an outcome of staff surveys⁹ and input from KPMG¹⁰ and IIP¹¹. A HR Learning and Development Strategy has been in place since 2015 and a further iteration is due to be agreed for the period 2018 – 2021. The AFBI Business Plan for 2017/18 had an objective to develop a HR Strategy to focus on talent management, resilience planning and employee motivation and engagement. AFBI has published a Values and Behaviours statement, which it expects its employees to adopt and reflect in their working practice.
- 3.20. Autonomy on people management issues rests with AFBI and this was generally recognised by AFBI interviewees. Although the Agriculture (Northern Ireland) Order 2004 permits the Institute to set levels of staff pay and allowances (subject to approval of the Department and the Department of Finance), it was recognised by some that the NICS terms and conditions which are applied in AFBI are not a good fit for its needs. The potential to offer attractive employment conditions to excellent scientists and senior management posts was considered constrained by these terms and conditions. This echoes the issues raised previously in this report in the “Securing and Retaining Scientists” section.
- 3.21. There was also a concern raised with respect to service quality, that AFBI had difficulty in ramping up capability quickly to address customer needs. The

⁹ Stress in the workplace survey, 2012/13 and Morale and Motivation Survey, 2012/13

¹⁰ Strategic Business Review of the Agri-Food and Biosciences Institute, KPMG, March 2012

¹¹ Investors in People Review 2011/12

need to plan people issues strategically, so they align with the needs and direction of the business was emphasised by some AFBI Interviewees and reference to a developing strategy was made. It will be important this strategy considers issues such as Recruitment and Retention, Reward and Recognition, Engagement, Leadership and Workforce Planning as well as Learning and Development. It should also address the embedding of organisational values and behaviours in the working practices of AFBI staff.

Recommendation 26

AFBI needs to put in place a People Strategy to underpin delivery of its strategic aims and to embed its values.

Recommendation 27

AFBI is recommended to review its terms and conditions for staff so they better meet strategic needs.

Data Management

- 3.22. AFBI has a framework of NICS and AFBI information systems and management policies and strategies to govern the management of data in the organisation. In the context of a data management maturity model, AFBI is considered to be at Level 2, which is defined as “Processes are planned and executed in accordance with policy”. AFBI is actively seeking to augment its data management systems. It has identified gaps and is taking action to address these. The need to remain compliant with the EU General Data Protection Regulations (GDPR) is a significant driver for this development. It would be helpful if there was an over-arching policy / strategy framework articulating AFBI’s approach and defining which NICS policies / strategy / standards it adopts.
- 3.23. As already raised with respect to service quality, AFBI interviewees identified the considerable bureaucratic burden that operating AFBI corporate systems, including data management systems presented to them in undertaking their work. Both AFBI and DAERA interviewees considered a records management system in AFBI would be helpful in facilitating timely responses to information requests. Limitations in science data systems were also described and it was recognised that improvements to the current Laboratory Information Management System (LIMS) arrangements could be made, including seeking to future-proof these. A DAERA-wide LIMS is being planned and this will facilitate an enhancement to how scientific results are held and can be used and communicated.

3.24. Some AFBI interviewees also identified constraints faced in gaining access to data held by DAERA to facilitate them progressing R&D programmes. It is important that fit for purpose data sharing agreements are in place to facilitate timely provision of data.

Recommendation 28

AFBI should agree and implement a data management strategy that addresses both corporate and scientific data management needs and strive to push its level of maturity in data management to maturity level 3 in the next 18-24 months.

Recommendation 29

DAERA and AFBI must ensure appropriate and timely data sharing between the organisations in order to meet business need and maximise the value of data in achieving objectives and additionally that data sharing is considered fully and agreed during the commissioning process.

Contribution to Economic Growth

3.25. It is important that AFBI considers the issue of its contribution to the NI economy, both at Institute level and at a project level. It is acknowledged that it can be difficult to measure the benefits of research and the written evidence provided by AFBI confirms this position. Nevertheless, there is potential for improvement to its approach and the consistency of its efforts on this issue. A more consistent approach to measuring benefits (even if this was within wide confidence limits) would make future Full Format Proposals easier to complete and give more reassurance to DAERA as funders. It is recommended that AFBI establish a project to assess how it currently addresses the issue of measuring the impact of its research at Institute, programme and project level.

Recommendation 30

AFBI to establish a project to improve how it measures the impact of its research at Institute, programme and project level.

Summary

- 3.26. AFBI science is held in high regard by those who use it and AFBI scientists are recognised as working hard to deliver for their customers. AFBI has a responsibility to account for its use of public money. Many AFBI interviewees described the bureaucratic burden of using AFBI's corporate support systems to record, monitor, manage and report as a significant distraction from the main purpose of their roles. These systems were not only burdensome for staff to use but did not deliver sufficiently for managers. Improvements to AFBI's corporate support systems, including its data management systems (such as records management, financial management and LIMS) could deliver significant benefit.
- 3.27. AFBI's demonstration of value for money is important for assuring customers (including DAERA) of the quality of service its delivers and in building scientific reputation. This could be much stronger and can be achieved by benchmarking quality and cost with comparative services from other providers.
- 3.28. DAERA's approach to funding AFBI, while compliant with "Managing Public Money NI" guidance is not considered sufficiently transparent by either party. The out-workings in terms of costs of services and how these can vary in-year are confusing to DAERA users and undermine their value for money perception of AFBI services. For better clarity of purpose, a funding model which provides core funding for functions deemed essential and transactional funding for other commissioned work should be explored.
- 3.29. Staff and estate costs are significant contributors to the cost of AFBI services. The arrangements for the management of the estate AFBI uses are complex. It is recognised that the estate is not of the correct size and needs rationalisation. While there are plans to address this, the pace of progress is slow, resulting in continuing inefficiencies. A reduction in the number of parties engaged in decision making on estate matters and moving decision making as close as practical to where it directly impacts could yield improvements.
- 3.30. AFBI is an expertise-led organisation and it is important that its people are recruited, led, motivated, managed, developed, supported, recognised and rewarded in a way that fully recognises its staff are the key to its success. AFBI has a public service ethos and this is reflected in its Values and Behaviours statement. A People Strategy will be central to supporting the achievement of these goals and embedding its Values.

4. Governance

Principles of Good Corporate Governance

- 4.1. Cabinet Office¹² explains corporate governance as the way in which organisations are directed, controlled and led. It defines relationships and the distribution of rights and responsibilities among those who work with and in the organisation, determines the rules and procedures through which the organisation's objectives are set, and provides the means of attaining those objectives and monitoring performance. Importantly, it defines where accountability lies throughout the organisation. Good corporate governance is central to the effective operation of all public bodies.
- 4.2. This Review has used the template for assessing good corporate governance as contained within Tailored Reviews: Guidance on Reviews of Public Bodies¹. The Review has considered compliance against the categories of accountability, roles and responsibilities, financial management, communication and conduct & behaviour. AFBI completed a governance self-assessment using the template and AFBI Sponsor Branch (ASB) also conducted a self-assessment to provide a perspective from its sponsorship role.
- 4.3. The Review found that, with one exception, both AFBI and ASB have confirmed full compliance with each category and sub-category and in the process provided appropriately detailed narrative and cross-references to evidence to support this (documents, web links, etc.). AFBI has therefore demonstrated compliance with the principles of good corporate governance.
- 4.4. The only area of non-compliance identified is in relation to the publication of spend data over £500. However, such publication is only something which is to be considered in applying best practice and AFBI confirmed that if any member of the public requested to see this information then it would be readily provided under Freedom of Information.

Sponsorship Management

- 4.5. The sponsorship arrangements in place between DAERA and AFBI are rooted in legislation and DoF requirements for sponsorship and appear comprehensive and robust. The Management Statement / Financial Memorandum (MS/FM) in place is a mandatory requirement and follows DoF

¹² Corporate Governance in Central Government Departments: Code of Good Practice, p.9.

guidance. The Sponsorship Manual¹³ outlines how operational actions should proceed in line with the MS/FM and legislation.

- 4.6. Operational planning and reporting mechanisms are often working too slowly to facilitate timely agreement and assessment of effectiveness and value for money. An illustration of this is the Annual Work Plan and associated processes. This leads to frustration, strain and loss of trust from both parties. It will be necessary to review the current approaches used for planning and reporting and seek to adjust so they can operate in a timely way. In doing so, it is essential they continue to meet the governance and accountability requirements necessary for a NDPB.
- 4.7. A significant resource is being applied by both parties to operate the planning and reporting mechanisms with resource used to address failure demand¹⁵(resource demand caused by a failure to do something or do something right for the customer) in both organisations. There is potential that more appropriate and sustainable mechanisms would facilitate timely planning and reporting, facilitating less failure demand resourcing.
- 4.8. As a priority the planning and reporting mechanisms currently in place should be reviewed with a view to adjusting to a more sustainable approach which meets governance and accountability requirements. Better communication around corporate plans should also facilitate better alignment of priorities between DAERA and AFBI, optimising the impact of AFBI effort for DAERA priorities.
- 4.9. The Cabinet Office issued good practice guidance for the relationship between Departments and their ALBs in February 2017. The DAERA / AFBI approach should be reviewed and adjusted to align with this. It is important that mutual respect for the contribution and role of each partner is built. A commitment to openness and timeliness by both parties will help build the trust and respect necessary for a positive relationship.

Recommendation 31

DAERA and AFBI to implement Cabinet Office good practice on relationships with arm's length bodies.

Recommendation 32

DAERA to adapt the Assigned Work Programme so that it focuses on outcomes, with all associated processes such as commissioning, delivery, reporting and evaluation adjusted accordingly.

¹³ Sponsorship Manual for the Agri-Food and Biosciences Institute, DAERA, November 2016

¹⁵ "Freedom from Command and Control; a better way to make work work" John Seddon, Vanguard Press, 2003

AFBI Board Effectiveness

- 4.10. There have been a number of previous reviews of the governance arrangements for the AFBI Board, including a review of corporate governance arrangements by ASM Ltd. in April 2016. The performance of the Board is also reviewed annually by means of a self-assessment exercise in accordance with the Board's Operating Framework so this review focused on its effectiveness in providing leadership and challenge to the organisation. Business Consultancy Services was engaged to support this work (Annex G) and this issue was also addressed in interviews with stakeholders.
- 4.11. The Agriculture (Northern Ireland) Order 2004, sets out that the AFBI Board should consist of a Chairman, a Deputy Chairman and not fewer than 8 or more than 18 other members, appointed by the Department. All Board members are non-executives, appointed in line with the Code of Practice for Ministerial Public Appointments in Northern Ireland. There are currently 13 serving members on the AFBI Board, including the Chair and Deputy Chair. The quorum for the Board is five members.
- 4.12. It is important to balance the numbers and expertise on a Board with the complexity of the role it undertakes. Board composition in terms of numbers and expertise was considered. NIAO guidance¹⁴ identifies a Board should be “.. sufficiently large to carry out its responsibilities, without unnecessarily limiting its effectiveness with excessive numbers that inhibit individual engagement for Board members”. “The most common size on a NDPB Board is eight, with an average of 11, within a range of 2 to 23”. In terms of representation it should have the level of representation needed “..to fully understand the issues it is facing”.
- 4.13. Given the AFBI Board currently has 13 members, consideration should be given to reducing this to around 11 at the next opportunity.
- 4.14. Interviewees advised the strategic leadership of the AFBI Board, was generally seen as effective and on an improving trajectory. It was considered important that the AFBI Board and DAERA have an aligned Vision and direction for the future of AFBI. Greater engagement with DAERA at a senior level would help ensure this is the case.
- 4.15. Interviewees indicated that the leadership the Board is providing on corporate issues is better than on science and industry issues and this may be a reflection of the skills and expertise of Board members. This could be

¹⁴ Board Effectiveness, A Good Practice Guide, The Northern Ireland Audit Office

addressed by seeking a Board member with science expertise relevant to the agri-food and environment sectors in NI at the next opportunity.

Recommendation 33

DAERA in conjunction with the AFBI Chair, to manage the size of the AFBI Board to align with Best Practice guidance, taking into account the complexity of its remit, with around 11 members.

Recommendation 34

DAERA in conjunction with the AFBI Chair, to ensure science expertise relevant to the agri-food and environment sectors in NI is represented on the AFBI Board.

Recommendation 35

DAERA and AFBI to seek to identify mechanisms to facilitate greater engagement at senior level.

Summary

- 4.16. In general the governance arrangements in place between AFBI and DAERA are considered strong and compliant with Department of Finance requirements.
- 4.17. With respect to sponsorship management, planning and reporting mechanisms operate too slowly to facilitate timely agreement, and assessment of effectiveness and value for money. This leads to frustration, strain and ultimately a loss of trust in both parties. It is necessary to review the current approaches/systems and seek to adjust/revise/replace so they operate in a timely way. In doing so, it is essential they continue to meet the governance and accountability requirements necessary for a NDPB.
- 4.18. The Cabinet Office issued good practice guidance for the relationship between Departments and their Arms' Length Bodies (ALBs) in February 2017. The DAERA / AFBI sponsor approach should be reviewed and adjusted to align with this. A commitment to openness and timeliness by both parties will help build the trust and respect necessary for a positive relationship.
- 4.19. Finally, the AFBI Board is considered to present good challenge and leadership to the organisation. Adjustments such as relevant science expertise and regular engagement of DAERA with the Board, could address some of the issues identified through this review and facilitate it providing greater leadership to the AFBI organisation.

Recommendation 36

DAERA should conduct a further formal review of AFBI in 2022.

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