

The delivery of animal health services in England

A literature review for the National Audit Office by the Centre for Rural Economy

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List of Abbreviations

AH	Animal Health
AHWS	Animal Health and Welfare Strategy
BCMS	British Cattle Movements Service
BIP	Border Inspection Post
bTB	Bovine Tuberculosis
CEFAS	Centre for Environment, Fisheries and Aquaculture Research
CSL	Central Science Laboratory
CVO	Chief Veterinary Officer
Defra	Department for Environment, Food and Rural Affairs
DETR	Department of Environment, Transport and the Regions
FMD	Foot and Mouth Disease
FSA	Food Standards Agency
FVO	Food and Veterinary Office (EU body)
HMRC	Her Majesty's Revenue and Customs
HPAI	Highly Pathogenic Avian Influenza
IAH	Institute for Animal Health
LACORS	Local Authority Co-Ordinator for Regulatory Services
LDCC	Local Disease Control Centre
MAFF	Ministry of Agriculture, Fisheries and Food
OIE	Office International des Epizooties
OV	Official Veterinarian
PSA	Public Service Agreement
RPA	Rural Payments Agency
SPS	Sanitary and Phytosanitary
SVS	State Veterinary Service
VLA	Veterinary Laboratories Agency
VMD	Veterinary Medicines Directorate
VSS	Veterinary Surveillance Strategy
WTO	World Trade Organisation

1. Introduction

This report presents the results of a review of literature to support the National Audit Office (NAO) value for money study into the delivery of animal health services in England. We understand that the NAO study will consider:

- (a.) whether the current delivery framework enables Defra to meet its animal health objectives in a well-managed way;
- (b.) whether the newly established Animal Health agency is well placed within the delivery framework to enable it to fulfil its remit; and
- (c.) whether resources are being effectively and efficiently allocated to successfully protect and improve animal health.

The NAO specified that the review of academic and policy literature must:

- (a.) detail and describe the regulatory framework governing animal health in England;
- (b.) chart the animal health objectives, responsibilities and policies of Defra and its delivery partners, highlighting where appropriate gaps, duplication and inefficiencies in the delivery framework;
- (c.) identify the key risks to animal health in England, and map these against current regulatory requirements and Defra's and its delivery partner's objectives and responsibilities;
- (d.) outline how animal health services in England are managed and funded; and
- (e.) summarise the performance of Defra and its delivery partners in handling recent animal disease outbreaks.

Chapter 2 of this report addresses points (a) and (d). Chapter 3 addresses point (b), Whilst Chapter 4 provides an overview of the information presented, analysing gaps in and overlaps in the functions and objectives. Chapter 5 addresses (c) and Chapter 6 concludes the report by addressing (e).

The overall picture presented by this review is of a very complex field of policy and regulation, subject to ongoing change and re-organisation. To a certain extent organisational and regulatory complexity cannot be avoided in dealing with the complex set of problems presented by animal health. However, a lack of understanding or coherent engagement with that complexity might raise problems in the implementation of current policy agendas that focus more on disease prevention. Although the system now seems able to contain major exotic disease outbreaks, its 'peacetime' operation is more problematic. If current processes are any example, the future operation of agendas around responsibility and cost sharing with industry could serve to amplify the complexity of the framework. Vertical linkages and the division of responsibility between Defra and Animal Health in this area are already uncertain, as exemplified by the location of Farm Health Planning within Defra (see pages 22-23). The focus on emergency measures, rather than on prevention or engagement with ongoing problems such as bovine tuberculosis, in spite of a core strategy (the Animal Health and Welfare Strategy) that emphasises prevention, is an indication that the delivery of animal health services may not be risk-based.

2. The Regulatory Framework for Animal Health in England

This section details and describes the key elements of policy and legislation and the various bodies that make up the animal health regulatory framework in England. It provides an overview of the various legislation and the bodies involved in the delivery landscape, before outlining the specific roles, aims and objectives of the various bodies and providing a more in depth look at key relationships and functions in light of current policy agendas.

2.1 International and national context

Animal health regulation in England sits within an international and European framework. At the international level, the UK is one of 172 members of the OIE (Office International des Epizooties, now usually translated as the World Organisation for Animal Health). The OIE develops and regularly updates standards for the animal health services of its members. These are collected in the Terrestrial Animal Health Code¹ and the Aquatic Animal Health Code², each of which has an accompanying manual of diagnostics and vaccines for the diseases specified in the code. The Terrestrial Animal Health Code lists over 80 types of animal disease. A condition of OIE membership is that any member country's Veterinary Authority must report any new incidence or change in the behaviour of a listed disease within the member country to OIE. (The Veterinary Authority for the UK as a whole is Defra and the CVO is the official delegate to OIE).

By following the standards of practice set out within the Codes, OIE members can regulate trade in animals and animal products among themselves with a reduced risk of spreading animal disease.

The OIE is a reference body for the World Trade Organisation (WTO), especially with respect to the WTO Sanitary and Phytosanitary (SPS) Agreement³, which sets out the relationship between trade and animal health measures. The SPS Agreement further enforces the importance of adhering to the standards set down for OIE members. The OIE Codes are taken as the key international standards for determining reasonable measures that may be taken by a state to protect animal health as far as trade dispute resolution is concerned. In other words, as long as the states concerned follow the OIE Codes it is unlikely that any import or export bans would be deemed unfair barriers to trade by WTO.

Much of the functioning of these standards is present in EU legislation governing veterinary checks for trade in animals and animal products and in the specified control measures to be taken against certain animal diseases. A new Animal Health Strategy for Europe has been launched which is a first step in working towards consolidating the large amount of EU legislation governing animal health into a single directive. Currently, Member States are required to provide a National Control Plan under Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. This regulation has been enacted in England under Official Controls (Animals, Feed and Food) (England) Regulations 2006 (S.I. 2006/3472) for Defra's responsibilities and Official Feed and Food Controls (England) Regulations 2006 (S.I. No 2006/15) for FSA's. The national control plan⁴ has to include information on the structure, relationships and responsibilities of the various 'competent authorities' for implementing animal health and food safety legislation.

The main piece of legislation governing animal health in England is the Animal Health Act 1981, as amended (most notably in 2002, following the 2001 FMD epidemic). There are around 175 statutory instruments applying to animal health issues. All but 31 are made under the Animal Health Act. Of those, most are made under the European Communities Act 1972 in order to transpose EU law in into national law when this falls outside of the provisions of the Animal Health

¹ http://www.oie.int/eng/normes/mcode/en_sommaire.htm

² http://www.oie.int/eng/normes/fcode/en_sommaire.htm

³ http://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm

⁴ <http://www.food.gov.uk/multimedia/pdfs/uknationalcontrolplan.pdf>

Act – mostly around veterinary checks for trade. The Animal Health Act permits for infringements of secondary legislation made under it to be considered offences and prosecuted.

2.2 Policy and delivery landscape

Defra

The Department for Environment, Food and Rural Affairs was formed in June 2001 in a merger of the old MAFF and the Environment and Rural Affairs elements of the DETR. It has lead responsibility for policy and legislation concerning animal health.

Food Standards Agency

The FSA is a non-ministerial Department which came into existence on 3rd April 2000, charged with protecting consumer interests in relation to food safety and standards. Its main implication in animal health issues is its ownership of the Meat Hygiene Service (see below), but the FSA also has interests in food borne diseases, including zoonoses (animal diseases which can be transferred to humans).

Animal Health

Animal Health is an executive agency of Defra. It is Defra's lead agency in combating disease in livestock and came into being in April 2007 as a result of a merger between the State Veterinary Service (an executive agency since April 2005), the Dairy Hygiene Inspectorate, the Egg Marketing Inspectorate and the Wildlife Licensing and Registration Service. The bulk of staff is from the State Veterinary Service.

Meath Hygiene Service

The Meat Hygiene Service was founded as an executive agency of MAFF on the 1st April 1995 as a post-BSE measure, taking on the enforcement of meat hygiene legislation from local authorities. Most MHS staff transferred from local authorities. The MHS became an executive agency of the Food Standards Agency on 1st April 2000. It is responsible for inspections and surveillance at abattoirs.

Rural Payments Agency

The RPA was formed in October 2001 as an executive agency of Defra, responsible for payments to farmers under the Common Agricultural Policy. The RPA conducts on-farm inspections for cross-compliance, some of which concerns animal health issues. The British Cattle Movement Service, which operates the cattle tracing system, merged with the RPA in 2003.

Veterinary Medicines Directorate

The VMD was established in 1989 and became an executive agency of MAFF in 1990; it is now an executive agency of Defra. It is responsible for licensing manufacturers and wholesalers of veterinary medicines and surveillance of residual in foodstuffs. It provides advice and policy development on all aspects of veterinary medicines to Government.

Local Authorities

In England, 149 local authorities are responsible for enforcing animal health legislation⁵ through inspections of a variety of premises and activities and taking measures up to court action in cases of non-compliance. Such activities are carried out through the Authorities' Trading Standards departments or Environmental Health departments. When regulatory functions are concerned, local authorities are represented at a national level by the Local Authorities Coordinator for Regulatory Services (LACORS). Since 2004, local authority enforcement for animal health legislation has been conducted under the terms of a Framework Agreement with Defra, drawn up with LACORS⁶.

⁵ UK National Control Plan (see note 4) page 88

⁶ <http://www.defra.gov.uk/animalh/ahws/pdf/frameworkagreement5-1.pdf>

HMRC

HM Revenue & Customs was formed, following the merger of Inland Revenue and HM Customs and Excise Departments on 18th April 2005. Part of its customs and excise function is to enforce and administer border protection. It polices the illegal imports of animals and animal materials through standard customs channels.

Port Health Authorities

Port Health Authorities are responsible for a variety of public health functions in ports. A local authority can be designated as a PHA or a PHA can be set up and designated as a discrete entity. PHAs are designated by the Department of Health. They are represented to government by the Association of Port Health Authorities which also acts to disseminate advice, best practice and legislative updates.

Central Science Laboratory

CSL was established in 1990 within ADAS⁷, becoming an executive agency of MAFF in 1992. The 20th century history of the body is a gradual integration of different laboratories' functions across bee health, plant health, wildlife management, pest identification, food science and food safety. The latter two functions only joined in 1994, after CSL had become established as an agency. All of its functions are now co-located on a single site near York. It is also home to the Bee Health Inspectorate.

Veterinary Laboratories Agency

The Central Veterinary Laboratory was established in 1894 and became an executive agency of MAFF in 1990. Veterinary Investigation Centres were set up in 1922 and came under the Veterinary Investigations Service within MAFF. These structures merged to form the VLA on 1st October 1995. The VLA provides veterinary research and surveillance under a framework agreement with Defra (actually not renewed since 1995). VLA has 15 regional laboratories, a national centre in Surrey and two surveillance centres at the vet schools in London and Liverpool.

The Centre for Environment, Fisheries and Aquaculture Science

A fisheries laboratory, established in Lowestoft in 1902, gradually took on more functions becoming the Directorate of Fisheries Research. Its name changed to CEFAS when it became an executive agency of MAFF in 1997. It is now an executive agency of Defra. It is home to the Fish Health Inspectorate.

The Institute of Animal Health

IAH is located at two sites one at Compton housing research into endemic diseases (those established in the UK) and one at Pirbright housing exotic disease research (those diseases not normally found in the UK). It is a world leader in animal disease research and is a reference laboratory for the OIE. It is not an agency of Government but its core funding comes from public money via the Biotechnology and Biological Sciences Research Council (BBSRC). IAH currently provides advice and research on a contractual basis. In 2006 an appraisal was carried out on behalf of Defra and BBSRC to consider merging IAH with the VLA.

Official Veterinary Surgeons

OVs (formerly known as Local Veterinary Inspectors) are vets in private practice who work under contract to government to deliver regulatory functions. They work for Animal Health under a standard contract, providing invaluable extra personnel. This contract is currently under renegotiation. OVs are represented by the British Veterinary Association. There are more registered OVs providing services related to pet passports rather than livestock inspection. OVs also work with the MHS, overseeing abattoir operations.

Figure 1 shows the key relationships between key bodies.

Table 1 details the high-level management and funding structures of the various bodies.

⁷ The former Agricultural Development Advisory Service, a limited company since 1997.

Figure 1
Animal Health Delivery Landscape

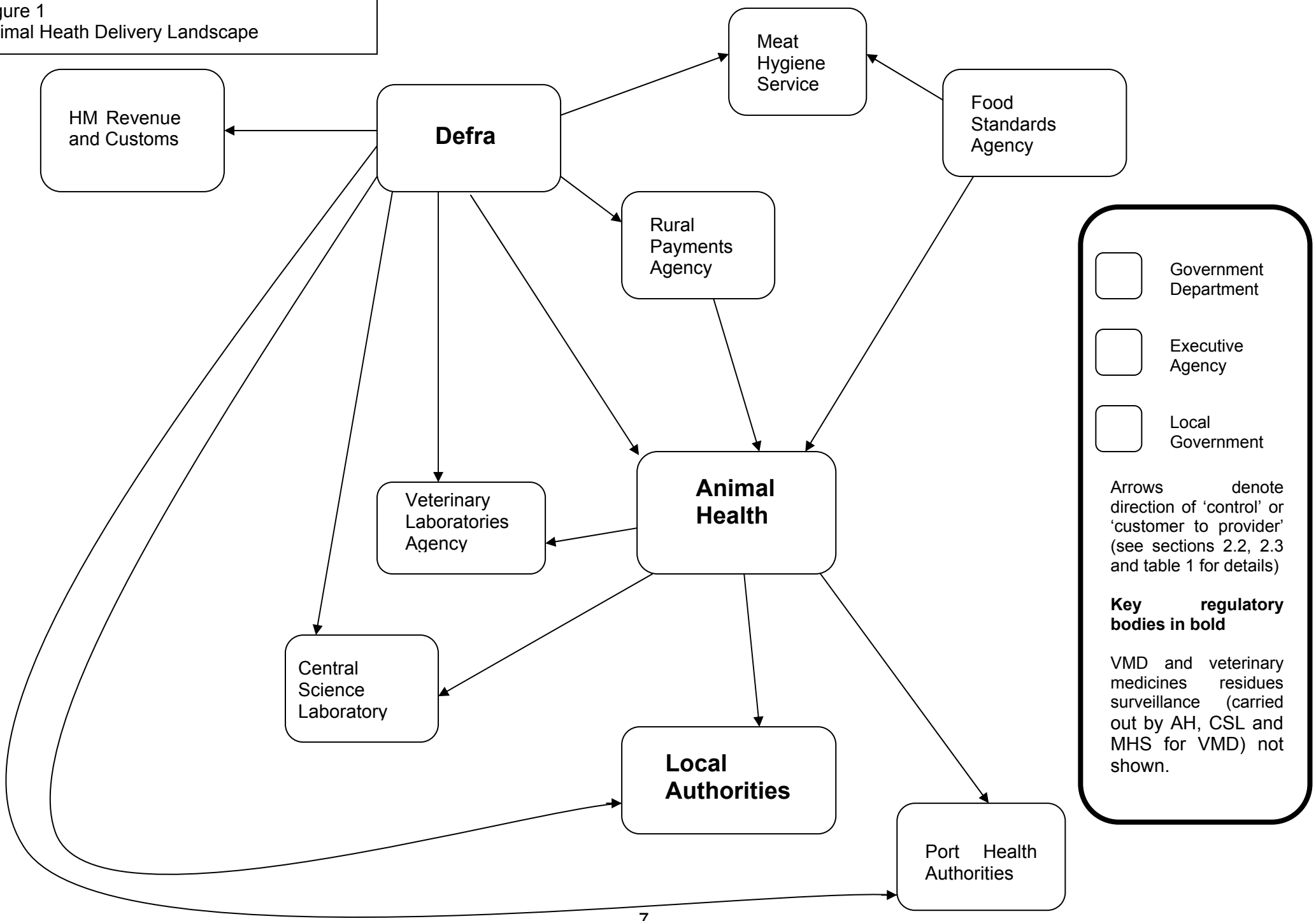


Table 1: High Level Management and Funding Structures						
Delivery Organisation	Type	Defra Corporate Owner	Defra Corporate Customer	Defra Management body	Form of relationship to Defra on delivery of animal health services	Funding
Animal Health	Executive Agency	Katrina Williams, Director General Food & Farming Group	David Dawson Food and Farming Group	Strategic Advisory Board	Framework	Core funding from Defra based on business plan. Service Level Agreement income from FSA, VMD, Welsh Assembly Government and RPA
CSL	Executive Agency	Gill Aitken, Legal	tbc	Laboratory Strategy Board	Framework	Over 65% of income in 2007-08 came from services to Defra. Defra provides seedcorn funding for technology and skills development. Income from external commercial research is increasing.
Food Standards Agency	Non ministerial department	N/A	N/A	N/A	Through Meat Hygiene Service	Central Government department
HM Revenue and Customs	Non ministerial department	N/A	N/A	N/A	HMRC has legal responsibility for enforcing border controls for non-EU imports. Defra international disease surveillance data is provided to HMRC to enable risk based enforcement.	Central Government department
Local Authorities	Local Authority	N/A	N/A	N/A (LACORS represents LAs in discussions with Defra on animal health regulation)	Legal responsibility for legislation under Animal Health Act. Framework agreement with Defra (via LACORS) outlines delivery principles and performance benchmarks.	Revenue Support Grant from central government for regulatory services. Additional funding available from Defra accessed annually via application to Divisional Animal Health Office [†] .
Meat Hygiene Service	Executive Agency (of FSA)	N/A	N/A	(MHS Board is sub-committee of FSA Board) Responsible to	Service Level Agreement.	Funded through charges for services to licensed plant operators, and through grant from FSA, based on draft business plan.

				SoS at Defra for Service provided. CVO can issue orders to MHS vets through MHS technical director during outbreak.		
Port Health Authorities	Local Authority (a range of LA duties may be assigned to PHA's)	N/A	N/A	N/A	Legal responsibility for animal and animal products at ports under Animal Health Act and subsequent Statutory Instruments	In addition to Revenue Support Grant and animal health funding, PHAs collect administrative charges on checks of imported organics and recover costs of veterinary checks at BIPs.
RPA	Executive Agency	Katrina Williams, Food & Farming Group	Mike Segal, Food & Farming Group	RPA ownership board	RPA has responsibility for ensuring cross compliance on animal health under single farm payment regulations.	UK and EU funds as the UK Funding Body for Common Agricultural Policy schemes.
VLA	Executive Agency	Nigel Gibbens, CVO, Food & Farming Group	Alick Simmons, Deputy CVO, Food & Farming Group	VLA Owners Advisory Board	Framework	Main funder is Defra (Almost 90% of income in 2007-08)
VMD	Executive Agency	Nigel Gibbens, CVO, Food & Farming Group	Brian Harding, Food & Farming Group	Regulatory Agencies Strategy Board	Framework	Funded through charges to industry for licensing.
Agriculture and Horticulture Development Board	NDPB (Levy Board)	N/A	N/A	N/A	No regulatory functions and no formal relationship, promotes animal health through relevant sector companies.	Statutory levy on businesses

[†]in 2007-08 £9.77million was applied for and only £8.5 million made available

2.3 Activities

This section describes the range of activities that are undertaken to deliver Animal Health services within England. Each activity is detailed along with the relevant EU and UK legislation, and the bodies with primary responsibility for the activity. **Table 2 (page 14) shows which organisation is responsible for each of these activities.**

Border biosecurity

Border biosecurity is the range of activities that keep animal disease out of the country. It entails inspections at customs for illegal imports of animals and animal products and inspections at approved Border Inspection Posts (BIPs) of legal imports of animals and animal products⁸. HMRC is responsible for detecting illegal imports through standard customs channels. Local Authorities and Port Health Authorities are responsible for inspection of imports of animal products at BIPs. Animal Health is responsible for overseeing imports of live animals at those BIPs which are approved for such imports. All BIPs are overseen by an OV. Animal Health is responsible for regular inspections of BIPs to ensure that they meet the requirements set out by the EU legislation and to take action where standards are not being met. Further detailed description of the operation of BIPs, the relevant EU and UK legislation and the responsibilities of the various bodies can be found in the BIP Manual⁹ the following is a summary of salient points. Directive 97/78 EC sets out the procedures at BIPs for checking products of animal origin from 3rd countries (outside the EU). Directive 91/496 governs imports of animals from 3rd countries.

Separate legislation and procedures govern trade between EU members. Directive 89/662/EEC sets out the responsibilities of member states of origin and what checks are permitted (in a non-discriminatory manner) at destination. Intra EU trade checks do not have to be made at border posts, but can be made at actual point of destination. Directive 90/425/EEC makes provisions for diseases which will lead to immediate emergency response in the form of territorial restrictions. This is the directive which is used to institute export bans during a disease outbreak.

Disease notification

Notifiable diseases are designated in three tiers. The OIE designates diseases which must be reported to its central office by member countries when they are detected there. The EU designates a range of diseases which must be reported to the European Commission by Member States when they are detected. The UK designates certain diseases which must be reported to Animal Health Divisional Offices (and then up the chain) when they are discovered. At the UK level, this reporting will be by animal keepers or their vets or by inspectors or Official Veterinarians working for local authorities, Animal Health or the Meat Hygiene Service (the first detected case of FMD in 2001 was found and reported by a MHS vet at an abattoir).

There are 39 notifiable diseases in the UK¹⁰ as specified under section 88 of the Animal Health Act 1981¹¹ and appended to it by subsequent orders made under the Act implementing EU legislation¹². Ten of these are notifiable to the EU under Directive 82/894/EEC¹³. The OIE lists a large number of diseases which members are expected to report on¹⁴, many of these are not found in the UK.

Movement licensing and recording

A full list of legislation governing animal movements can be found on Defra's website¹⁵. The main element of legislation is the Disease Control (England) Order 2003¹⁶ (making permanent a series

⁸ A list of BIPS is available from <http://www.defra.gov.uk/animalh/int%2Dtrde/imports/bips/>

⁹ <http://www.defra.gov.uk/animalh/int-trde/imports/bips/pdf/bipmanual.pdf>

¹⁰ Listed at <http://www.defra.gov.uk/animalh/diseases/notifiable/index.htm>

¹¹ http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810022_en_11#pt7-pb3-11g127

¹² http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810022_en_13#sch3

¹³ http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Directive&an_doc=1982&nu_doc=894

¹⁴ http://www.oie.int/eng/normes/mcode/en_chapitre_2.1.1.htm#chapitre_2.1.1

¹⁵ <http://www.defra.gov.uk/animalh/id-move/legislation/index.htm>

¹⁶ <http://www.opsi.gov.uk/si/si2003/20031729.htm>

of post FMD requirements). Animal movements must be accompanied by a licence. In most cases a general licence applies. This cannot be used if the owner or premises has been placed under an order not to use the general licences. A separate movement recording form must also be submitted attached to the licences after the animals have been moved. Different forms are required for different livestock species.

The BCMS division of the RPA maintains the Cattle tracing System and the Animal Movements Licensing System databases. The RPA record cattle movements, local authorities record movements for sheep, goats, pigs and deer. Local authorities have access to both databases for inspection and enforcement purposes.

Premises licensing (including animal gatherings)

Animal Health is responsible for approving licenses for the following types of premises:

- Animal by-products premises processing (any of the following if they handle animal by-products or processed animal by-products: rendering plants, incinerators which only incinerate animal by-products, oleochemical plants, biogas and composting plants, technical plants, petfood plants, collection centres and final users, intermediate and storage plants)
- Livestock markets
- Quarantine premises
- Animal Gatherings

The licensing process for markets and other gatherings will include agreeing contingency plans for any suspected incidence of disease with the Animal Health Divisional Office. The licensing applications for gatherings and markets also inform the operator about biosecurity procedure and relevant legislation which makes certain biosecurity requirements enforceable (Animal Gatherings (England) Order¹⁷). Local Authorities are responsible for enforcing Animal Gatherings Legislation.

(NB Animal Health also licenses dairy and egg producers but this is focussed on hygiene for public health and is not specifically related to controlling animal disease).

The Food Standards Agency is responsible for licensing meat establishments to operate under Regulations (EC) 852/2004 and (EC) 853/2004. Meat establishments are slaughterhouses, farm slaughter facilities, game handling establishments and cutting plants.

Emergency control measures

Various EU legislation applies in emergency control situations, including export bans (see border biosecurity sections, above). In England, the Animal Health Act gives powers to impose movement restrictions and for compulsory slaughter of animals. There is also, within the act a duty to consider vaccination. Increased surveillance and the tracing of animals that may have come into contact with infection is another set of activities, alongside preparing for carcass disposal. Emergency control measures are led by the CVO and Animal Health, but require Local Authority support for increased inspection and enforcement. The exotic disease contingency plan sets out the responsibilities of various bodies in emergency situations¹⁸.

Contingency planning

Contingency planning is the precursor activity to emergency control measures. A contingency plan details how emergency control measures will be applied in the case of an exotic disease outbreak, what the responsibilities of various bodies are and the chain of command. It may also include the development of decision support tools to aid in the management of an outbreak. Various European Directives which detail disease control measures also require contingency plans to be prepared for the diseases they specify and approved by the Commission¹⁹. The Animal Health Act

¹⁷ <http://www.opsi.gov.uk/si/si2006/20062211.htm>

¹⁸ <http://www.defra.gov.uk/animalh/diseases/control/contingency/exotic.htm>

¹⁹ E.g. Directive 92/119/EEC and Directive 2003/85/EC (specifically for FMD)

2002 amendments require a contingency plan for dealing with an exotic animal disease outbreak (originally specifically FMD but now expanded to include all major exotic animal diseases, including rabies and bluetongue) to be revised annually and put before parliament²⁰²¹.

Risk analysis (enforcement / operational)

In line with current agendas concerning efficient and proportionate enforcement of regulations, local authorities are required to undertake a risk analysis of their Animal Health regulation activities. This process is specified in the Framework document²² and is based on standardised approaches developed by LACORS.

Defra is currently developing a risk based prioritisation tool to assist in the efficient distribution of effort and resources towards particular diseases²³.

Risk analysis (strategic)

Strategic risk analysis is a policy function rather than a regulatory one. It is focused on determining priorities for strategies and delivery of policy. There is no specific legislation covering such activities and no specific reference to the process in animal health documentation. It is included as an activity here because it should entail consideration of the institutional risks to animal health outlined in section 4.

Surveillance (national)

Veterinary surveillance includes all of the activities undertaken to collect, compile and distribute information about the incidence of animal disease with England. Anybody who comes into contact with animals has a role to play in relation to this activity. The surveillance reporting process for the most serious animal diseases is governed by the disease notification legislation, described above. But information is collected about many more animal diseases, including zoonoses, as well as environmental poisoning and welfare issues. For endemic diseases, the VLA is responsible for collating all information on from its scanning surveillance programmes (tests carried out on samples sent by vets and others for analysis at VLA labs) and works with CSL on wildlife disease surveillance. Animal health has the lead in investigating exotic diseases through the notification system. The VMD conducts surveillance for chemical residues. Defra is responsible for a specially developed information management system known as RADAR (Rapid Analysis and Detection of Animal-related Risk) which collates veterinary surveillance data from a variety of sources.

Surveillance (international)

The International Disease Surveillance team of Defra's International Animal Health Division carries out surveillance of the global animal disease situation²⁴. They monitor the international animal disease situation by collating information from veterinary authorities of trading partners, the OIE, reference laboratory reports (VLA and IAH Pirbright), overseas embassies and other published materials. They produce and publish preliminary assessments and qualitative risk assessments. When the risk of a disease entering the UK from elsewhere is deemed high, the team informs other relevant bodies, including those responsible for national surveillance, enforcement and emergency control measures.

Cleansing and disinfection

Thorough cleansing and disinfection is a key element of biosecurity practice as it can remove pathogens that would otherwise be inadvertently spread. Although this is recommended as part of all routine stock management practices it is enforced in certain key situations. The Transport of Animals (Cleansing and Disinfection) (England) (No. 3) Order 2003²⁵ (as amended) specify that all livestock vehicles must be fully cleansed and disinfected as soon as possible after unloading; this must be done before re-loading and within 24 hours if re-loading is not immediate. Drivers of

²⁰ <http://www.defra.gov.uk/animalh/diseases/control/contingency/exotic.htm>

²¹ http://www.opsi.gov.uk/acts/acts2002/ukpga_20020042_en_3#pt4-l1g18

²² <http://www.defra.gov.uk/animalh/ahws/pdf/frameworkagreement5-1.pdf> (page 51)

²³ <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/programme/prioritisation.htm>

²⁴ <http://www.defra.gov.uk/animalh/diseases/monitoring/index.htm>

²⁵ <http://www.opsi.gov.uk/SI/si2003/20031724.htm>

vehicles that have unloaded at slaughterhouses must give a signed declaration that they will take their vehicle for C&D as soon as possible. C&D is also an important part of emergency control measures after animals at an infected premises have been slaughtered and disposed of.

On-farm biosecurity

Measures taken by anybody on a farm premises to prevent the spread of pathogens were highlighted during the 2001 FMD epizootic as central to fighting animal disease. Known as biosecurity, these measures include minimising the contact of animals, people and equipment through planning and cleaning all personnel, buildings and equipment before and after contact with animals. During a disease outbreak, biosecurity would also include disallowing access to the farm for non-essential personnel. Amendments under the Animal Health Act 2002 require biosecurity advice to be published and updated regularly²⁶. Defra's farm health planning initiative (see section 3) also has a role to play in encouraging good practice in biosecurity. To date, attempts to determine how to make biosecurity enforceable have failed due to the problems of setting measurable criteria for good biosecurity²⁷.

Inspection (farm)

On farm inspection of animal health issues can be conducted by a number of different bodies and under a number of different legal requirements. The Rural Payments Agency is responsible for ensuring that farms meet the cross compliance measures of the Common Agricultural Policy Single Farm Payment. This involves an inspection of 1% of all eligible holdings each year. Six of the standard management practices which must be adhered to for cross compliance concern animal health issues. RPA relies on Animal Health to carry out inspections and provide data on these. (NB 1% of holdings must be inspected by each competent authority. This does not seem to require that the same 1% are inspected by all bodies.) Local Authorities carry out inspections to check compliance with animal health legislation. Animal Health officers carry out on-farm investigations after reports of disease and as part of surveillance programmes (such as bTB). (NB it is not clear under exactly which circumstances AH vets do carry out inspections.) Actual enforcement activity is usually left to local authorities to implement.

Inspection (abattoir)

Inspections at abattoirs serve three key purposes: enforcement of animal welfare at slaughter legislation, animal disease surveillance and public health protection (through monitoring animal health and slaughter practices). All of these functions are carried out by the Meat Hygiene Service on behalf its parent department, the Food Standards Agency, and under Service Level Agreement to Defra and Veterinary Medicines Directorate.

Inspection (markets and transport)

Local authorities are responsible for enforcing all relevant legislation at animal gatherings and for animal under transport. Animal transports can be subject to spot checks at any time and markets and gatherings are visibly attended by local authority animal health inspectors. Transport inspections are subject to risk-based implementation, as is all other enforcement under the Framework document that sets out local authority duties on behalf of Defra.

Research

Primary research underpins many of the activities already described. Better understanding of the pathology and epidemiology of diseases can provide improved treatments, prophylactic and diagnostic techniques as well as tracking changes in the incidence and activity of a disease. Research contributes to strategic risk analysis and policymaking, contingency planning and emergency control measures, biosecurity and surveillance.

²⁶ http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810022_en_2#pt1-pb2-11g6

²⁷ Donaldson A (2008) "Biosecurity after the event: animal disease and risk politics", Environment and Planning A, Volume 40 pp1552 – 1567.

Table 2: Activities and Organisations

	Border biosecurity	Disease notification	Movement licensing	Movement recording	Premises licensing (including animal gatherings)	Emergency control measures	Contingency planning	Risk analysis (enforcement)	Risk analysis (strategic)	Surveillance (national)	Surveillance (international)	Cleansing and disinfection	On-farm biosecurity	Inspection (farm)	Inspection (abattoir)	Inspection (transport)	Research
Defra		X				X	X		X		X		X				X
FSA									X								X
Animal Health	X	X	X	X	X	X	X		X	X		X	X	X		X	
Local Authorities	X		X	X	X	X	X	X				X		X		X	
Meat Hygiene Service					X	X				X					X		
Port Health Authorities	X																
HM Revenue and Customs	X																
Veterinary Medicines Directorate										X							
Rural Payments Agency				X									X	X			
Veterinary Laboratories Agency										X							X
Central Science Laboratory (inc. Bee Health Inspectorate)										X							X
Centre for Environment Fisheries and Aquaculture Science (inc. Fish Health Inspectorate)																	X
Institute for Animal Health																	X

3. Animal Health Policy and Delivery Objectives

Table 3 (page 17) describes the key aims, objectives and targets of the main bodies in the delivery landscape. CEFAS has been left out of this table as it is peripheral to the main concerns of this report. The VMD has been left out of this table as its licensing of new veterinary medicines is peripheral to the main concerns of this report and its inspection of veterinary medicine residues is focussed more on human health and its sampling is carried out by Animal Health and MHS.

Aside from the listed targets and objectives of these policy and delivery bodies there are a number of key policy agendas and documents that, in principal, drive the development and delivery of animal health services.

Animal health and Welfare Strategy²⁸

Published in 2004, the Animal Health and Welfare Strategy (AHWS) was published with the stated aim to: “Develop a new partnership in which we can make a lasting and continuous improvement in the health and welfare of kept animals while protecting society, the economy, and the environment from the effect of animal diseases.”

The AHWS has to 5 key strategic goals²⁹:

- Working in partnership
- Promoting the benefits of animal health and welfare: prevention is better than cure
- Ensuring a clearer understanding of the costs and benefits of animal health and welfare practices
- Understanding and accepting roles and responsibilities
- Delivering and enforcing animal health and welfare standards effectively

The original AHWS implementation plan³⁰ summarised the objectives as:

- a) reductions in the costs associated with endemic disease in animals;
- b) reduced incidence of the zoonotic diseases leading to a lower occurrence of directly attributable ill health in humans;
- c) improved animal welfare; and
- d) increased security against future outbreaks of costly exotic diseases in animals.

Two key areas of concern have developed out this strategy and its goals which have considerable purchase on the subject of this review: responsibility and cost sharing and farm health planning. Responsibility and cost sharing is being overseen by the England Implementation Group³¹, set up to drive the AHWS forward. This agenda represents a significant shift in the regulation of animal health issues – which have traditionally been subject to rigid top-down enforcement and compensation – prompted by the scale of recent exotic disease problems (FMD in 2001) and escalating endemic disease problems (bTB). The UK Responsibility and Cost Sharing Consultative Forum³² is a stakeholder group set up in 2006 to “make recommendations to Ministers on a new Government and Industry partnership approach to how Animal Health and Welfare Policy is developed, delivered and funded in the UK”³³. The EIG provides a challenge function to the output from the Forum. The proposals of the forum were due in July 2008³⁴.

²⁸ <http://www.defra.gov.uk/animalh/ahws/strategy/ahws.pdf>

²⁹ As summarised by Eves Review of the Animal Health and Welfare Delivery Landscape

³⁰ http://www.defra.gov.uk/animalh/ahws/strategy/implementation_plan.pdf (page 15)

³¹ <http://www.defra.gov.uk/animalh/ahws/eig/index.htm>

³² <http://www.defra.gov.uk/animalh/ahws/sharing/forum/index.htm>

³³ <http://www.defra.gov.uk/animalh/ahws/sharing/forum/tor.htm>

³⁴ <http://www.defra.gov.uk/animalh/ahws/sharing/forum/tor.htm>

Farm health planning is a Defra owned initiative run through an industry partnership Working Group³⁵ that clearly takes forward a responsibility sharing approach, albeit on a voluntary basis. It is intended to get livestock keepers to take a more planned and active responsibility for the health of their animals. The incentive for creating a farm health plan is set out by the slogan “healthy animals, healthy profits”. According to the Farm Health Planning Working Group’s Positive Animal Health Action Plan³⁶: “Farm health planning is a proactive approach to positive animal health incorporating animal disease prevention and control. It is:

- Early recognition and identification of diseases present at a holding;
- Identification of the risks of introduction and spread of diseases and infections;
- Putting in place measures to manage risks, and improve overall disease prevention and control.
- A tool for identification of cost effective measures, which contributes to farm business planning. “

Veterinary Surveillance Strategy³⁷

2003 saw the publication of the 10 year Veterinary Surveillance Strategy (VSS), *Partnership, priorities and professionalism: A strategy for enhancing veterinary surveillance in the UK*. The VSS was produced in response to inquiries into BSE and FMD, which highlighted the need for improved surveillance. It also has an integral role in delivering the desired outcomes of the *Animal Health and Welfare Strategy*. The VSS sets out 5 goals for the improvement of veterinary surveillance which appear relatively straightforward:

- 1) Strengthen collaborations
- 2) Develop a prioritisation procedure
- 3) Derive better value from surveillance information and activities
- 4) Share information more widely
- 5) Enhance the quality assurance of outputs

The second goal was originally intended to focus on the allocation of resources for surveillance. Following the publication of the AHWS it has developed into the production of a decision support tool for targeting resources on all animal health issues, as noted in section 2.

Eves Review

In 2006 David Eves published his report commissioned by Defra to review the delivery landscape for animal health policy. In a wide-ranging review of operations from Defra through the then State Veterinary Service, to Local Authorities and the RPA, he made 55 recommendations for reform of the delivery process. His key recommendations were built around his findings that the delivery landscape was overly complex and often poorly co-ordinated, partly through a lack of performance management tools. Among his recommendations was that a single national inspectorate should be set up for on-farm work to prevent the overlap of different agencies required to conduct on-farm inspections. Respondents to a Defra consultation on Eves’ findings tended to feel that local authorities should retain their inspection and enforcement duties and that a national inspectorate was not currently a good idea.

OV Reform programme

Animal health is currently renegotiating the terms of its working arrangements with OVs to set standards by which vet practices can become ‘framework suppliers’ making them eligible for OV contract work.

³⁵ <http://www.defra.gov.uk/fhp/about/workinggrp.htm>

³⁶ <http://www.defra.gov.uk/fhp/pdf/actionplan.pdf>

³⁷ <http://www.defra.gov.uk/animalh/diseases/veterinary/strategydoc.pdf>

Table 3 Organisational aims, objectives and targets			
Organisation	Aim	Objectives	Targets
Defra	enable everyone to live within our environmental means. This is most clearly exemplified by the need to tackle climate change internationally and through domestic action to reduce greenhouse gas emissions, and to secure a healthy, resilient, productive and diverse natural environment.	<p>Strategic Objective 4: Economy and society resilient to environmental risk and adapted to the impacts of climate change. [One intermediate outcome is “public health and the economy protected from animal diseases”]</p> <p>Outcome of AHWS (formerly Defra PSA9): Animal health and welfare of kept animals improved, and society, the economy and the environment protected from the impact of animal disease, through sharing the management of risk with the industry</p>	No longer a PSA relating to Animal Health. Defra will continue to use indicators from Animal Health PSA for the noted intermediate outcome of Departmental strategic objective 4 (reduction in BSE and TB, increase in FHP)
FSA	to protect the health of the public, and the interests of consumers, in relation to food.	<ul style="list-style-type: none"> • To develop effective policies relating to food safety and to other interests of consumers in relation to food. These policies will be based on close consultation with those who stand to be affected, and with other interested individuals and organisations. • To provide clear, practical advice, information and other forms of assistance to all stakeholders. Our stakeholders are all the individuals and representative organisations who have a direct interest in our activities, or are likely to be affected by them. • To build and maintain a reputation for expertise and excellence in matters connected with food safety and other interests of consumers in relation to food. • To maintain effective working links with devolved administrations, other public bodies and stakeholder organisations with an interest in food safety and standards, in the UK and elsewhere. • To make decisions and take action proportionate to the risk, and with due regard to costs and benefits. • To ensure that the interests of UK consumers in relation to food are effectively promoted within the European Union and in other international forums. <p>These objectives apply to all aspects of the food chain, from primary producers to final consumers.</p>	<p>Reducing foodborne disease further</p> <p>1 We will work with industry to achieve a 50% reduction in the incidence of UK-produced chickens which test positive for Campylobacter by the end of December 2010</p> <p>2 We will work with industry to achieve a 50% reduction in the incidence of pigs which test positive for Salmonella at slaughter by the end of December 2010</p> <p>3 We will develop a measure of slaughterhouse hygiene and secure improvements by the end of December 2010</p> <p>4 Delivering proportionate BSE and TSE controls based on the latest scientific knowledge</p> <p>5 We will promote and aid the development of a sensitive, rapid and cost-effective live test for TSEs by the end of December 2010</p>
Animal Health	<p>Principal purpose:</p> <p>07-08 Leading the control of notifiable animal diseases on the ground, because of their economic or public health consequences</p> <p>08-09 To minimise the risk and impact of</p>	<p>work collaboratively with the industry, delivery partners and policy makers to jointly deliver the Animal Health and Welfare Strategy for Great Britain and Government’s wider objectives in animal health and welfare. For the period covered by this plan, our objectives are:</p> <ol style="list-style-type: none"> 1. To optimise our capacity to serve our purpose; 2. To modernise and improve the way we work; 3. To deliver our services in ways that best meet customer needs, and 4. To deliver agreed public and animal health and 	<p>For 07-08 To implement a new Operations Management Structure and keep management capacity under review</p> <p>To implement succession planning and talent management schemes</p> <p>To develop and state values and behaviours fit for the future</p> <p>To implement plans for professional and technical training in</p>

	<p>notifiable animal diseases, for the protection of public health and the economy throughout Great Britain.</p>	<p>welfare strategies and policies and transformational strategies of Government</p> <p>(from corporate and business plans07-08)</p> <p>08-09</p> <p>We will aim, where appropriate, to play a more central role in working with others to simplify processes across the entire notifiable disease landscape. This will contribute to 'Better Regulation' and make it easier to deliver across organisations. Ultimately, this will make it simpler for the customers and hence be more effective.</p> <p>Objectives:</p> <ol style="list-style-type: none"> 1. Develop our capacity and capability to meet the demands of now and the future 2. Become more consistent, effective and efficient to provide better value for money 3. Establish and maintain a balanced customer-focused approach so that both we and our customers know what service to expect 4. Develop Animal Health's position as the lead in our core business area to ensure an effective and joined-up approach 5. Work with partner organisations, the industry and individuals to shape a complete, simple and coherent package of measures 	<p>specific skill areas</p> <p>To implement the Veterinary and Technical Development Pathway</p> <p>Implement phase one of the Official Veterinarians Reform Programme;</p> <p>Complete solution confirmation and design stages of the programme;</p> <p>Complete the design, development, planning and implementation stages of the Contact Management module and the planning and pre-implementation preparatory stages of the TB and Brucella module of the programme</p> <p>Conduct a rigorous assessment of current response capability, including immediate mobilisation capability, identify current gaps in field readiness and develop and implement an Action Plan for improvement</p> <p>Develop the organisation's Operations Strategy by:</p> <ul style="list-style-type: none"> _ Establishing a Guidance Programme _ Establishing an Investigations Programme _ Document the enforcement hierarchy and review enforcement policy and efficacy <p>Agree and implement collaborative working with the Rural Payments Agency</p> <p>Collaborate with others to develop the e-portal Whole Farm Approach</p> <p>To actively engage in the development of policy with policy customers</p> <p>Develop and implement quality assurance arrangements for report case work and bovine TB testing Pilot the development of private practice quality assurance schemes in the Official veterinarians Reform Programme</p> <p>We will review and refresh working relationships with Local Authorities (for implementing AHWS)</p>
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			<p>Operational targets</p> <p>Bovine Tuberculosis</p> <p>To ensure that at least 97% of blood samples submitted in the year for gamma interferon tests are of a satisfactory condition. Where submitted samples are rejected by the Veterinary Laboratories Agency (VLA), to work with them to investigate the reasons for failure. During the year, to develop and implement refinements to any stages in the collection, storage and transport process under our direct control that have a limiting influence on the proportion of successfully completed tests, and to issue instructions to ensure that consistent standards are followed throughout the agency.</p> <p>Ensure that blood samples are collected for no less than 95% of herds/ animals for which application of the gamma-interferon test is compulsory.</p> <p>Ensure that 65% of 'at-risk' TB herds are traced and tested within 9 weeks of confirmation of the original test result. Within this time-frame, to prioritise the testing and tracing of cattle moved to 3 and 4 year parishes. Separately, we will lead discussions with TB Policy colleagues to identify and test other options for prioritising tracings work, for future implementation and monitoring.</p> <p>Issue movement restrictions on 98% of 'high-risk' herds within 2 working days of confirmation of the TB test result (reactors). Where TB is suspected from lesions identified at slaughter, to ensure restrictions are placed on 98% 'high-risk' animals and herds within 2 working days of receipt of notification from the Meat Hygiene Service.</p> <p>Exotic disease outbreaks:Readiness and Resilience</p> <p>Enhance emergency preparedness by planning and delivering a large-scale exercise on classical swine fever by the end of March 2008 involving Animal Health, Defra, the Devolved Administrations, the industry and operational partners. Plan, prepare and deliver a programme of local exotic disease exercises in Animal Health Divisional Offices, involving operational partners.</p> <p>Undertake an assessment of the readiness and resilience of the organisation's corporate centre through the application of the management assurance scheme, ERMAS.</p> <p>Develop and implement plans for professional and technical training to support those tasks critical to operational readiness and resilience.</p> <p>Animal Health and Welfare Strategy for Great Britain</p>
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			<p>Building on the 2006/07 objectives, strengthen engagement with the Government Office Regions and key regional stakeholders to facilitate the development of preliminary regional Action Plans for the implementation of the Animal Health and Welfare Strategy for Great Britain in the regions.</p> <p>Finance and Efficiency Continue to work with Policy colleagues to implement the cumulative £4.2 million Gershon efficiency savings agreed with the Department for the 2004 Comprehensive Spending Review period.</p> <p>For 08-09 Achieve 3% (£3.4m) efficiency gains by the end of the financial period 2008-09.</p> <p>Work with Defra's Food and Farming Group to plan a programme of Transfer of Functions to Animal Health by the end of quarter two. The programme will include the development of specific capabilities to deliver the new work successfully and implementation of the first tranche of agreed transfers before the end of April 09.</p> <p>Review the capabilities and deployment of resources in disease emergencies and produce proposals for improvements including associated costs. Agree and publish an implementation plan with corporate customers in England, Scotland and Wales by the end of quarter one.</p> <p>Successfully implement the Business Reform Programme (BRP) Customer Contact Module to the specification agreed by the BRP Programme Board.</p> <p>Carry out a customer analysis and identify key customer segments and satisfaction drivers for them. Cover the full spectrum of our customers (including our corporate and direct customers), and devise and implement a programme of measures to make Animal Health more customer-centric.</p>
Meat Service	Hygiene "The purpose of the MHS is the protection of public health and animal health and welfare in licensed meat premises in Great Britain, through proportionate enforcement of relevant legal requirements" (Framework	"a) to consistently and effectively enforce all relevant public health and animal health and welfare legislation, and provide supervision, inspection services, and audit, in licensed premises; b) to deliver efficient, high quality services, exploiting technology, and constantly strive for excellence;	<p>Agree and deliver all SLA requirements with policy customers and in accordance with the priorities framework</p> <p>(Indicator: engage with FSA and Defra on policy reform and flexibility in delivery of official controls) Deliver through THMS programme in accordance with agreed timetable</p>

	document wording)	c) to achieve the performance targets set by the Food Standards Agency (FSA) Board; and d) to operate in an open, accountable and independent way, respecting legislative requirements, and promoting inclusion and involvement. “	
Veterinary Laboratories Agency	<p>We safeguard public and animal health through world class veterinary research and surveillance.</p> <p>We provide our customers with the highest quality scientific data and advice to support evidence-based policymaking while providing best value for money.</p> <p>We work collaboratively to deliver leading edge veterinary research, surveillance, consultancy and laboratory testing services through a series of integrated science programmes.</p> <p>We maintain an emergency response capability for animal health and public health threats.</p> <p>We develop colleagues to their full potential and recognise their individual and collective contribution.</p>	<p>(Selected)</p> <p>C1. Sustain a long-term partnership with Government based on open dialogue & work with them to help them define and articulate their needs</p> <p>I1. Continue to deliver the science programme strategies</p>	<p>C1.1 Maintain & develop a dialogue with Defra policy customers through regular meetings</p> <p>C1.2 Maintain & develop a dialogue with Food Standards Agency customers through regular meetings</p> <p>C1.3 Develop & maintain a dialogue with the SVS</p> <p>C1.4 Develop a dialogue with European contacts at SMG level</p> <p>C1.5 Maintain a dialogue with Home Office Customers through CBRN steering group</p> <p>C1.6 Test critical elements of VLA's business continuity plan & ensure it meets requirements</p> <p>C1.7 Maintain emergency preparedness through DERC</p>
Central Science Laboratory	<p>“CSL’s primary aim is to provide Defra with an efficient and competitive service of scientific support, research and advice to meet both statutory and policy objectives, and Defra’s Public Service Agreement (PSA) and Service Delivery Agreement (SDA) targets.” [in Crop Sciences, Food Safety and Quality, Pesticides Risk Assessment, Animal Disease</p>	<p>achieving demanding annual financial, efficiency and quality of service targets set by the Secretary of State; carrying out research and services to the highest scientific and ethical standards and implementing and maintaining appropriate rigorous quality control procedures; maintaining appropriate scientific expertise at the level required to provide advice to Defra customers; improving the quality and effectiveness of services to Defra by carrying out strategic research to maintain and develop technical capability and to develop new technologies;</p>	Not available?

	Risk Assessment, Horticulture, Wildlife and Land Management] (from framework)	providing and encouraging cost-effective technology transfer to facilitate the exploitation of new technologies; achieving the effective exploitation of CSL's intellectual property, in conjunction with the relevant customers; maintaining the international scientific reputation of CSL and extending links with scientific institutions in the EC and elsewhere; applying Citizen's Charter and Modernising Government principles to the operations of the Agency and seeking to maintain the quality of services to customers. Implementing other Government and statutory cross-cutting initiatives such as electronic records management, Freedom of Information Act, e-business.	
Rural Payments Agency	The aim of RPA is to operate those CAP measures financed from the Guarantee Section of the EAGGF, that are delegated to it within England and as appropriate the UK, and to provide high quality and accessible data on animal traceability within Great Britain. (from Framework document)	(selected) <ul style="list-style-type: none"> • Administer those CAP schemes, in support of the Department's policy objectives, and other services as delegated in full conformity with EU and domestic law and accreditation requirements; • Provide operational advice in support of policy formulation; • Provide fair responsive high quality services to its customers, minimizing administrative burdens placed on the industries it serves; • To provide high quality and accessible data on animal traceability to support public health, animal health and welfare requirements; [NB this no longer features in business plan] • To maintain and continue to develop core capability and flexibility to meet changing requirements. 	To have paid 75% by value of valid 2007 SPS claims by 31 March 2008 and 90% by value of valid 2007 SPS claims by 31 May 2008 Record 98% of notifications of births, deaths and movements of cattle on the cattle tracing system within 14 days of their receipt Demonstrate a material improvement in effective joint working with Defra and the Defra network across all relevant interfaces compared with the February 2007 survey, as measured by feedback from key partners
Local Authorities			Framework activities which map to regulatory activities
Port Health Authorities			Framework activities which map to regulatory activities
HM Revenue and Customs		Objective III: Strengthen frontier protection against threats to the security, social and economic integrity and environment of the United Kingdom in a way that balances the need to maintain the UK as a competitive location in which to do business.	Number of seizures of prohibited and restricted goods (Products of Animal Origin)

4. Analysis of functions and objectives

This section provides an overview of key points which emerge from the information in the previous two sections, aiming to identify any gaps, overlaps or inconsistencies in responsibilities and objectives. (Some key points are underlined.)

The work of the two key lab-based agencies for this area (VLA and CSL) is well defined and their objectives focus on delivering high-quality science to the Defra customer. VLA has control of the endemic surveillance programme but works with CSL where its expertise is required. Outside of routine work such as surveillance and reporting, the emphasis is placed on the policy makers to ask the right questions and request advice.

In general animal health delivery work is well defined as far as notifiable diseases (endemic or exotic) are concerned, but there is potential overlap on certain diseases or types of disease (e.g. food borne zoonoses) between FSA and Defra agencies.

Table 2 clearly shows that there is an overlap in the organizations working on key activities. For example AH/LAs/MHS all have responsibility for premises licensing - do they all need to be involved in this? In addition, many bodies conduct surveillance work but this does not mean they are effectively sharing the data with each other.

Currently, local authorities and the RPA both record animal movements. Animal Health is involved in the Livestock Partnership with industry bodies to look at changes in the way movements are recorded, but it is not clear if there will be a simplification of recording responsibilities.

Table 2 also raises significant questions about the level of risk analysis involved in the regulatory process. The number of bodies involved does not clearly match the level of risk they are managing. For example, there are more of bodies concerned with border biosecurity than with cleansing and disinfection, yet the 2001 FMD outbreak clearly demonstrated that border biosecurity is imperfect and far greater emphasis had to be placed on local control and cleansing and disinfection³⁸.

Defra's changing targets and objectives with regards to animal health undoubtedly reflect the moves towards responsibility and cost sharing. The lack of PSA targets for animal health issues (regardless of the problems of accountability this change introduces) is a clear indication that animal health, despite being a very public problem as acknowledge by the AHWS, is no longer purely a matter of Government intervention.

The changes taking place within Animal Health, as evidenced by the reformulated core purpose and new target presentation format, also represent a move in the direction of a more inclusive and risk based approach to regulation in this area. The simplified format of targets (presenting only those set by the Minister) and reduced number of goals presented as targets gives the appearance of a more honed purpose and sets the targets on broad institutional objectives, rather than the mix of detailed operational targets in the previous business plan.

The key change in the wording of the core purpose of AH from "Leading the control of notifiable animal diseases on the ground" in 2007-08 to "To minimise the risk and impact of notifiable animal diseases" in 2008-09 is very significant. The first is a hangover from the SVS as a kind of specialist emergency response unit. The second raises questions over the extent to which AH can meet this purpose, given the responsibilities and linkages it has. Whilst AH has demonstrated the capacity to respond well in an emergency, its activities during 'peace time' – which become the focus under the new framing of the core purpose – are not defined with the same rigour and transparency. The industry linkages being fostered through the responsibility and cost sharing agenda and, perhaps more significantly, the farm health planning programme are key measures in

³⁸ Donaldson A and Wood D (2004) "Surveilling strange materialities: Categorisation in the evolving geographies of FMD biosecurity" *Society and Space*, Volume 22, pp 373-391.

disease risk reduction. Yet they are run from core Defra and the exact input of AH into each is not made clear. Given the complexity of the regulatory framework and delivery network as it exists, the piecemeal implementation of the responsibility and cost sharing agenda raises the possibility of fragmentation of responsibility and 'buck-passing'.

Whilst the new AH Business Plan gives every appearance of an organisation set to undergo change in vision and operation, it is not clear exactly what the intended end-point of this change is. What remains consistently unclear from policy and organisational documents is the balance of operational activities and enforcement, expert advice and oversight functions expected of AH and the extent to which it is a co-ordinating central node in the delivery landscape. As figure 1 shows, AH is a hub for the delivery of animal health services in terms of the position it occupies and its linkages to other bodies. However it is not clear that is actually a position of leadership or coordination. Eves notes that he was consistently faced with the question "What is the SVS for?" In respect of its successor, Animal Health, this is still not necessarily satisfactorily explained. As Eves notes for the SVS, AH is principally about 'permissioning' through its licensing activities. Whilst this a risk reduction activity owned by AH, most enforcement is still delegated to local authorities. The actual regulatory position of AH, which surely impacts on its fitness for purpose, remains ill-defined.

5. Mapping the Risks to Animal Health

5.1 Types of risk

Two types of risks can be identified when it comes to the management of animal health concerns: disease risks and institutional risks. Disease risks are those factors that are more-or-less directly related to the biological, pathological and epidemiological characteristics of disease. These factors influence the likelihood of a disease outbreak occurring or of an outbreak having serious consequences. Institutional risks are those factors related to the management of the organisations, systems and individuals who work to control animal disease. These factors influence the ability of those actors to manage disease risks and tackle a disease outbreak.

5.2 Disease risks

Major exotic disease outbreak

The most obvious risk to England's overall animal health situation is a major exotic disease outbreak such as 2001's FMD epizootic.

Accidental import of pathogens through increased trade and travel

In 2004 Defra asked VLA, CSL, IAH and CEFAS to prepare reports for a *State of the Art Review of Biosecurity Risk Management*³⁹. A key risk identified by all those bodies was the increased opportunities for accidental spread of pathogens in a rapidly globalising world, with increased international transport linkages for trade and leisure. This risk has been identified by the OIE and in academic literatures on the social science of disease risk.⁴⁰

Climate change

The increased risk to animal health from climate change was also raised in the 2004 review. Climate change may lead to changing incidence of diseases through changed distributions of host and vector species.

Emergent disease

An emergent infectious disease results from an evolutionary change to a pathogen currently known to science or from the discovery of a new pathogen. In recent years most emergent diseases have had an animal origin⁴¹.

Endemic disease escalation

Although exotic diseases are the most significant emergency problem, the possibility that a disease which is endemic to the UK might increase in incidence should not be ruled out as a source of major problems. The key example here is Bovine Tuberculosis (bTB), which has been noted as one of the most significant animal health problems of the moment⁴².

Deliberate release/bioterrorism

The social, economic and political problems that can be caused by a major animal disease outbreak mean that the deliberate release of an infectious disease into livestock must be taken seriously as a possible act of terrorism.⁴³

Biosecurity failures at laboratories

The 2007 outbreak of FMD was most likely the result of an accidental release of virus from the Pirbright facility used by the IAH and two private companies⁴⁴. Although the biosecurity of labs

³⁹http://www.oie.int/eng/Edito/en_edito_mars07.htmhttp://www.defra.gov.uk/science/Project_Data/DocumentLibrary/SD0308/SD0308_3037_EXE.doc

⁴⁰http://www.oie.int/eng/Edito/en_edito_mars07.htm; Keil R and Ali H (2006) "The avian flu: some lessons learned from the 2006 SARS outbreak in Toronto" Area Volume 38, pp107–9; Donaldson A and Murakami Wood D (2008) "Avian influenza and events in political biogeography" Area Volum 40, pp128–130

⁴¹ http://www.oie.int/eng/edito/en_edito_nov04.htm

⁴² <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmenvfru/1010/1010.pdf>

⁴³ Blancou J and Pearson JE (2003) "Bioterrorism and infectious animal diseases" Comparative Immunology, Microbiology and Infectious Diseases, Volume 26, pp 431–443

⁴⁴ <http://www.hse.gov.uk/news/archive/07aug/finalreport.pdf>

handling the FMD virus and other animal pathogens has been assessed as a result, the possibility of an accidental release cannot be ruled out.

Growth of EU member states

This risk is perhaps a specific case of the second risk outlined in this subsection, that increased trade and travel will lead to accidental import of infection. However it is of particular importance as many new member states in Eastern Europe have major endemic disease problems (such as classical swine fever). Also significant is that fact that EU trade and veterinary check rules mean that there are different levels of border biosecurity and different organisational responsibilities for intra EU trade.

5.3 Institutional risks

Lack of traceability

The necessity of being able to reliably trace the movements of animals and animal products was noted by the 2004 State of the Art Review. Traceability depends on the movement recording and licensing systems which are currently under review (see section 2.3).

Poor communication between Defra and agencies on Defra's needs.

Understanding the requirements of the Defra customer was identified as the top risk in the VLA's Business Plan for 2007-08. The risk of poor communications of Defra's needs to its agencies applies across all agencies.

Poor input of expert advice into policy

The ongoing separation of policy and delivery functions raises the possibility that expert knowledge is removed further from the core policy process into delivery agencies. This is particularly acute in the case of Animal Health (the SVS and its predecessors had been a central part of policy development in the agricultural field⁴⁵).

Poor on-farm practice (biosecurity and surveillance)

Every major outbreak of animal disease is now accompanied by media commentary on the investigation of biosecurity on the infected premises⁴⁶. The 2001 FMD outbreak was traced to exceptionally poor hygiene practices at a pig-finishing unit in Northumberland.

Poor risk communication (especially to farmers)

Risk communication is not simply about getting information to those who need it. It is a complex process and needs to take into account the understandings of risk amongst those being communicated with and the perceived knock-on effects of risk management measures. This is especially important in communicating to farmers and other livestock managers who have their own understandings of how their activities and those of others impact on disease incidence⁴⁷.

Bad circulation of national surveillance data through Defra network / Data gaps and poor internal communication and information sharing

The existence of the Veterinary Surveillance Strategy and its emphasis on data handling and sharing highlights the significance of this issue. Even within the VSS in place, it is not clear how detailed surveillance data will be shared outside of the government network (i.e. with industry and stock managers). The second point is a more general version of the same concern. The 2004 State of the Art Review identified problems in sharing data amongst all of those bodies in the animal health delivery framework as a serious risk.

Complexity of regulatory framework damages relationships with stakeholders

As this review has already demonstrated the regulatory framework for animal health is complex. It is not just farmers and stock managers who are impacted by it: distributors and retailers might also

⁴⁵ Lowe P and Donaldson A (2007) "The Co-Production of the Agricultural State", paper presented at Science and Technology Studies in Farming and Food workshop, Lancaster University.

⁴⁶ for example: <http://www.timesonline.co.uk/tol/news/uk/science/article2866298.ece>

⁴⁷ Enticott, G (2007) Lay Epidemiology, Candidates for Bovine Tuberculosis and the Implications for Biosecurity. XXII European Congress for Rural Sociology, Wageningen, Holland.

come into contact with it. The identification of this risk is based on Marks and Spencer's submission to the Anderson inquiry into FMD in 2007⁴⁸, which noted considerable difficulties in negotiating the controls and their differing interpretations across different local authorities with regards to its distribution of meat products to stores.

Too much institutional re-organisation / Too much change in organisational structure

These two risks are essentially similar, one referring to re-organisation of the whole delivery landscape and the other to internal re-organisation within each body. Continual re-organisation can lead to a lack of 'bedding in' to work areas and uncertainty over the distribution of responsibilities and information. With the creation of Animal Health and the posited merging of other delivery bodies, institutional re-organisation is a key feature of the animal health delivery landscape. Internal changes to organisational structure have been a feature of recent developments in Defra and Animal Health (especially with the continued transfer of functions between the two).

International data sharing (surveillance/outbreaks)

A key reason for the foundation of the OIE was to facilitate the sharing of animal health information between countries. However, after 80 years of operation the OIE is still attempting new initiatives to ensure its Members provide accurate animal health information for each other's benefit⁴⁹. Reliable international surveillance data is especially important for risk-based approaches to border biosecurity.

Funding for prevention/surveillance measures

In 2007, farmers were expected to meet the costs of the voluntary bluetongue vaccination scheme; a compulsory scheme would have cost 50% more due to additional regulatory and administrative burden⁵⁰. No EU funding was to be available to farmers to cover costs until 2008. Such funding gaps obviously reduce the likelihood of farmers vaccinating and therefore raise the risk of disease spread. In addition, Defra's Science Advisory Council has noted that too much emphasis is placed on contingency planning for major outbreaks and not enough on more sustainable prevention measures such as biosecurity and surveillance⁵¹.

Table 4 shows how the various risks are being addressed. It maps the risks onto the activities described in section 2.3 and the strategies, objectives and targets outlined in table 2.

Key to Activities listed in second column.

1. Border biosecurity
2. Disease notification
3. Movement licensing Movement recording
4. Premises licensing (including animal gatherings)
5. Emergency control measures
6. Contingency planning
7. Risk analysis (enforcement)
8. Risk analysis (strategic)
9. Surveillance (national)
10. Surveillance (international)
11. Cleansing and disinfection
12. On-farm biosecurity
13. Inspection (farm)
14. Inspection (abattoir)
15. Inspection (transport)
16. Research

⁴⁸www.cabinetoffice.gov.uk/~media/assets/www.cabinetoffice.gov.uk/fmdreview/submissions/marks_spencer_submission%20pdf.ashx

⁴⁹ http://www.oie.int/eng/Edito/en_edito_jan02.htm

⁵⁰ <http://www.fwi.co.uk/Articles/2008/02/14/109409/producers-face-20m-bluetongue-vaccine-bill.html>

⁵¹ [www.defra.gov.uk/science/documents/papers/2006/SAC%20\(05\)%2029%20SAC%20response%20to%20E&IS%20public%20consultation.pdf](http://www.defra.gov.uk/science/documents/papers/2006/SAC%20(05)%2029%20SAC%20response%20to%20E&IS%20public%20consultation.pdf)

Table 4: Risks to Animal Health in England			
Risk	Regulatory activity	Objectives / strategies / work areas	Targets
<u>Disease risks</u>			
Accidental import of pathogens through increased trade and travel	1, 8	HMRC Objective 3	HMRC target for seizures
Major exotic disease outbreak	All	AH core purpose	AH 08-09 target "Review the capabilities and deployment of resources in disease emergencies and produce proposals for improvements including associated costs." AH BRP customer contact module
Emergent disease	9, 10, 16	Veterinary Surveillance Strategy, VLA / CSL surveillance work	
Climate change (shifts disease distribution, new invasive species)	8, 9, 10, 16		
Endemic disease escalation	2, 3, 4, 7, 8, 9, 11 (gatherings)	Veterinary Surveillance Strategy, VLA / CSL surveillance work	Animal Health Business Reform Programme customer contact module
Deliberate release/bioterrorism	1, 5, 6		
Biosecurity failures at laboratories	4, 5, 6	Relates more to regulation under new Pathogens Regulations	

growth of EU member states (eastern Europe has endemic CSF)	1, 10	Defra International Animal Health Team responsibility (international Surveillance) (also EU FVO responsibility)	
<u>Institutional risks</u>			
Lack of traceability	3	RPA Objective 4	Listed RPA target on recording movements
Poor communication between Defra and agencies on Defra's needs. (VLA's top risk in corporate strategy).			AH 08-09 customer analysis target??
Poor input of expert advice into policy			
Poor on farm practice (biosecurity and surveillance)		Farm Health Planning	
Poor risk communication (especially to farmers)		Partnership working goal of AHWS Veterinary Surveillance Strategy Objectives 1 and 4	
Bad circulation of national surveillance data through Defra network		Veterinary Surveillance Strategy Objectives 1 and 4 RADAR	
Data gaps and poor internal communication and information sharing		OV reform programme (improved updates to OV framework practices)	

Complexity of regulatory framework damages relationships with stakeholders		AH 08-09 aim to simplify processes	AH 08-09 customer analysis target
Too much institutional re-organisation.			Potential negative impact on AH target for transfer of functions
Too much change in organisational structure			Potential negative impact on AH target for transfer of functions
International data sharing (surveillance/outbreaks)		A Defra International Animal Health team area, but also involves CVO / other delegates to OIE making representation on perceived problem areas at international level	
Funding for prevention/surveillance measures (this has been a big issue over bluetongue)			AH 08-09 target "Review the capabilities and deployment of resources in disease emergencies and produce proposals for improvements including associated costs."

6. Performance in recent disease outbreaks

This final chapter will provide a very brief overview of the Government's performance in two recent exotic disease outbreaks (FMD in 2007 and HPAI in Suffolk, also in 2007) and some recent commentary on an endemic problem (bTB) for comparison.

FMD

Iain Anderson, who conducted the lessons learned review of FMD in 2001, was asked to carry out a review of the handling of the 2007 outbreak⁵². In general, Anderson found that the handling of FMD in 2007 was much improved over 2001. Nevertheless he was able to make a number of recommendations for continued improvements, some of which echo themes already raised in this review, especially internal operational issues within Animal Health that relate to concerns raised as institutional risks in Chapter 5.

Several points relate to the national level of risk analysis and contingency planning:

- There should be greater emphasis on testing full chain of emergency response. This is significant given the evident complexity of the chain, as demonstrated throughout this review.
- There should be regular rehearsals of notifiable disease response. Again, this is significant given the lack of clarity in responsibility for inspection etc. noted in this review.
- Consideration needs to be given to the scalability of response. That is, could such a good response be mounted during a larger outbreak, given personnel constraints?

Another two points are important in terms of the organisation of the delivery chain and Animal Health's place in it:

- There should be a review which considers increased delegation of responsibility to the LDCC, allowing for better integration of local knowledge and experience during an outbreak.
- Animal Health needs to develop better relationships with local stakeholders through its Divisional Offices. This is especially important given the institutional risks around data sharing and risk communication outlined in Chapter 5.

A further set of recommendations recognise the importance of Animal Health staff, but suggest that more emphasis needs to be placed on training, in particular:

- Better training for Divisional Operations Managers and Regional Operations Managers
- Better training in key skills for AH personnel (e.g. data handling)
- Better data and information handling within AH.

Finally, there is a recommendation that more emphasis should be placed on conducting research on day-to-day control measures, not just on emergency response. This echoes concerns raised in section 5.3 and, in many ways, sums up the overall picture of the delivery chain. Emergency response is clearly delimited and planned for and can be successfully delivered; measures for a more sustainable approach to disease prevention, despite their centrality to the Animal Health and Welfare Strategy, are confused and poorly lack focus.

HPAI

The report into the H5N1 HPAI outbreak in Holton, Suffolk in 2007⁵³ is similarly complementary on the general handling of the outbreak. It raises several points of interest here.

- Potential lessons to be learned were collected on the go by all staff involved on a specially prepared pro forma.
- There was some confusion over FSA / MHS involvement as the infected premises included a meat processing plant. This highlights the sometimes confusing nature of the regulatory framework.

⁵² <http://www.cabinetoffice.gov.uk/fmdreview.aspx>

⁵³ <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/holton-lessonslearned030807.pdf>

- A media spokesperson needs to be appointed during an outbreak for better communication of risk to the general public. This point is focussed on minimising economic impacts on the industry as a whole, but does little to address more widespread risk communications issues.
- There should be an assessment of skills of all AH staff to formally match them up to LDCC positions in the event of an outbreak. This process would surely be of benefit, alongside requirements for better training noted by Anderson, in militating against risks of poor data handling and communication.

bTB

In 2008 the Environment, Food and Rural Affairs Select Committee published a report⁵⁴ (based on the final report of Independent Science Group) that identified bTB as one of the “most serious animal health problems in Great Britain today” and concluded that the current approach to bTB “was not working effectively”. Amongst other points, the Committee recommended that Defra adopt a “multi-faceted approach ... using all methods available” to combating bTB. These methods should include:

- more frequent cattle testing, including combined use of different available tests
- the evaluation of post-movement cattle testing;
- greater communication with farmers on the benefits of biosecurity measures;
- the deployment of badger and cattle vaccines when they become available in the future
- use of badger culling hotspots but not as a sole measure.

In its comments on the Government’s response to their report⁵⁵ the Committee noted its disappointment with the Government’s response. The Committee considers Defra not to be taking bTB seriously enough and to be playing down its severity, placing too much emphasis on long term vaccine development and not enough emphasis on an integrated multi-faceted bundle of measures to combat the disease now.

Whilst several of the issues already identified as problems (stakeholder relationships and risk communication and general operational issues) come into play, the concerns of the Committee serve most importantly to drive home the point that, whilst emergency response to major exotic diseases might be working reasonably successfully, not enough emphasis is placed on day-to-day problems in animal health.

⁵⁴ <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmenvfru/130/130i.pdf>

⁵⁵ <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmenvfru/1010/1010.pdf>