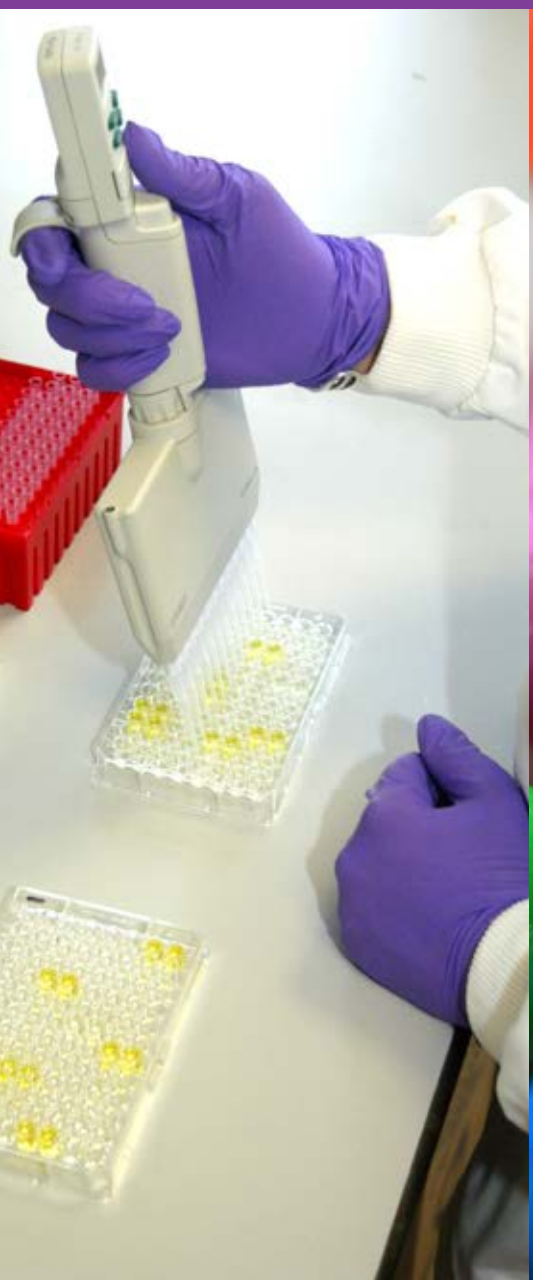
Home Office

Animals in Science Regulation Unit
Annual Report 2015



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Ministerial foreword

The life sciences sector plays a pivotal role in improving our understanding of how biological systems work. I am committed to a thriving life sciences sector and to maintaining a strong research base here in the UK through the delivery of a rigorous framework of regulation.

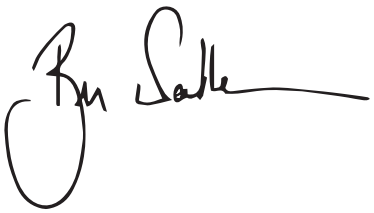
The UK continues to maintain a leading position in science and innovation alongside support for good animal welfare. The two are mutually dependent – good science can only be achieved where there is good animal welfare. Through a strong regulatory framework, underpinned by these commitments to strong science and welfare, we will continue to provide assurances to the public.

In the coming year I am committed to three areas. First, we continue to look for ways to reduce the use of animals in scientific research and to support and accelerate the uptake of the 3Rs of Replacement, Reduction and Refinement. I am greatly encouraged by our success in 3Rs research and the use of alternatives, but this should not be seen as purely a drive to reduce numbers – it must be more nuanced. No animal should be used unnecessarily and no animal should suffer unnecessarily, yet we must ensure that the scientific outcomes are achieved. This is our commitment to the 3Rs and our commitment to each animal that is used.

The UK's pursuit of scientific excellence, with the 3Rs at its heart, is globally admired and provides opportunities for high standards of animal welfare alongside high quality science. In the last year we have been actively sharing this philosophy with other countries. It is my belief that by sharing our knowledge and success with others, they will similarly want to take up our lead.

Secondly, we must continue to make the UK the location of choice for pioneering research and development. I strongly believe that the UK must not become a place of red-tape barriers and unnecessary bureaucracy. Nevertheless, we must maintain our position as a leader in strong regulation. With appropriate balance, we can maintain and build opportunities for creativity and a thriving home for our universities and industry. In the forthcoming year we will continue to review our regulatory processes to drive efficiency and effectiveness.

Thirdly, I am committed to us actively embracing openness and transparency in this field. Only through such openness will we maintain the public's trust and support for the important scientific work that is conducted. In doing so we will develop a medium-term implementation plan that commands a position of public assurance of the information we hold and that which we will make public. This should move us forward to an era of openness that builds understanding and accountability in the regulatory framework.



Ben Wallace MP
Minister of State

Foreword

Looking back…

In 2015 the Animals in Science Regulation Unit (ASRU) further consolidated the requirements of the Animals (Scientific Procedures) Act 1986 (ASPA) whilst also addressing the aims and objectives of the incoming Government.

In October the Minister announced a new policy to restrict the testing of household products and their ingredients on animals. This demonstrates our commitment to advance the 3Rs – replacement, reduction and refinement – whilst avoiding simply exporting work overseas to countries where welfare standards may be lower. It is also a signal of our intent to support innovation. By devising a rational approach to implementing a 'ban', I hope other countries will consider how they may join us.

In 2014 we published both Guidance and a Code of Practice to support delivery of ASPA. In 2015 we published a number of Advice Notes, which embrace guidance on caring for animals at the end of procedures including re-homing and re-use on other procedures. Some food-producing animals may go for slaughter for human consumption but only when authorised. We have also described how inspectors conduct a harm–benefit analysis on research proposals. Advice on recognising patterns of low-level concern provides a support tool for establishments in their assessment of the effectiveness of their governance systems.

The number of genetically altered animals (GAAs) bred for use in scientific procedures has risen from just over 1 million in 2005 to nearly 2 million in 2014. While the use of GAAs, mostly mice, is critically important for much research, it is vital that minimum numbers are bred in line with the 3Rs. We have therefore consulted widely with establishments to consider ways to improve and assess the efficiency and effectiveness of GAA breeding programmes. Through developing an interactive tool, we seek to minimise the production of surplus animals whilst recognising the importance of this research.

Further details of all these Advice Notes is included in Section 2 of this report. Not only do they guide duty holders in complying with their obligations under ASPA, they also contribute to openness and transparency in our work since all are public facing documents on our website. The UK is a world leader in promoting and implementing the 3Rs. During 2015 we have made progress with our programme of international engagement to influence the uptake and adoption of 3Rs approaches globally. Success is starting to flow from these initiatives. For example, China has recently committed to enacting regulations for research animal welfare that will have the 3Rs at their core and will support the welfare standards they have already developed.

In 2016 I will step down as Head of ASRU and hand the leadership baton to Sue Houlton. I am proud to be leaving a legacy of a flourishing regulator that commands public respect and stakeholder confidence. Everyone in the ASRU team is fully committed to the principles of better regulation. Our role is to enable high quality science whilst safeguarding animal welfare. Through balancing these two demands, we retain public confidence in the way that animals are used in science in Great Britain. As I leave the Unit I look forward to admiring from a distance ASRU's continued success as a world-class regulator.

Dr Judy MacArthur Clark CBE
Head, Animals in Science Regulation Unit

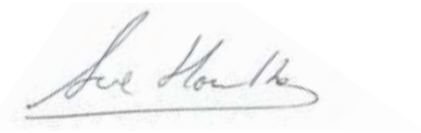
...And looking forward

As the incoming Head of the Animals in Science Regulation Unit (ASRU) I look forward to taking up the challenges and opportunities both now and for the future. Those challenges and opportunities frame my vision for the areas where we, the regulator, will have focus and deliver impact.

Through the comprehensive process of project evaluation we will continue to ensure that project authorisation is founded on sound science and the implementation of the 3Rs – replacement, reduction and refinement. Central to the delivery of the regulatory framework is the commitment that research can only be carried out where no practicable alternative exists and that controls keep suffering to the minimum. Through effective licensing and regulatory monitoring of these requirements and values we can be confident in the rigour of our process.

At the heart of ASRU is an effective Inspectorate. Inspectors visit all establishments under the Animals (Scientific Procedures) Act 1986 (ASPA) to reassure the public that the care of animals and compliance with the Act's requirements are fully met. I am immensely proud of the professionalism and expertise with which inspectors undertake their activities of inspection, project licence assessment and compliance monitoring. A fully effective and properly resourced inspectorate regime is essential to our ongoing success as a regulatory authority.

The need for openness and transparency in this field is ever greater. Transparency is a key theme for the Government and continues to be progressed by the life sciences sector through the Concordat on openness in animal research. In addition to new areas of policy we will continue our drive for greater expediency on the publication of non-technical summaries to project licences so that the public may be informed of projects conducted under the regulatory framework.



Dr Sue Houlton

Section 1: What the Animals in Science Regulation Unit does

"We regulate the use of animals in scientific research for the benefit of people, animals and the environment through the provision of impartial licensing procedures and evidence-based advice, and by encouraging the development and use of the 3Rs (replacement, reduction and refinement)"

The Animals in Science Regulation Unit (ASRU) is a part of Home Office Science. It is responsible for regulating the operation of the Animals (Scientific Procedures) Act 1986 (ASPA).

The Unit is led by the Senior Leadership Team (SLT), comprising the Head of Unit, the Head of Policy and Administration and the Chief Inspector.[1]

Two groups make up ASRU: Policy and Administration and the Inspectorate. These groups work closely together in collaboration to deliver ASRU's purpose.

The Policy and Administration Group's role

The Policy and Administration Group is based at the Home Office in Marsham Street, London and in Swindon. The Group comprises four teams:

- Policy;
- Licensing;
- Compliance; and,
- Business Support.

Policy and legislation

The Policy Team provides direct support to Ministers to develop and deliver policy objectives. The team is responsible for the development of new policies and guidance supporting the delivery of ASPA. In 2015 the team supported, among other things:

- the policy on household product testing;
- responding to the Commission's response to the European Citizens' Initiative;
- the production of various Advice Notes; and,
- the publication of statistics.

Licensing

A key function of ASRU is licensing, which is carried out jointly by the Licensing Team and the Inspectorate. The purpose of the Licensing Team is to act on behalf of the Secretary of State in operating the licensing and regulation system. Its core functions within this remit are:

- issuing establishment, personal and project licences, and amendments;
- dealing with appeals against decisions taken;
- taking action in cases of non-compliance; and,
- leading on the technology for e-licensing.

At the end of 2015 the Team comprised the Head of Licensing (reporting to the Head of Policy and Administration), three Licensing Managers and five Licensing Officers.

1 In 2016 the ASRU leadership team will comprise six individuals: Head of Unit and Chief Inspector (one role); Deputy Head of ASRU and Head of Policy (one role); Head of Business Strategy and Operations; and the three Principal Inspectors.

Compliance

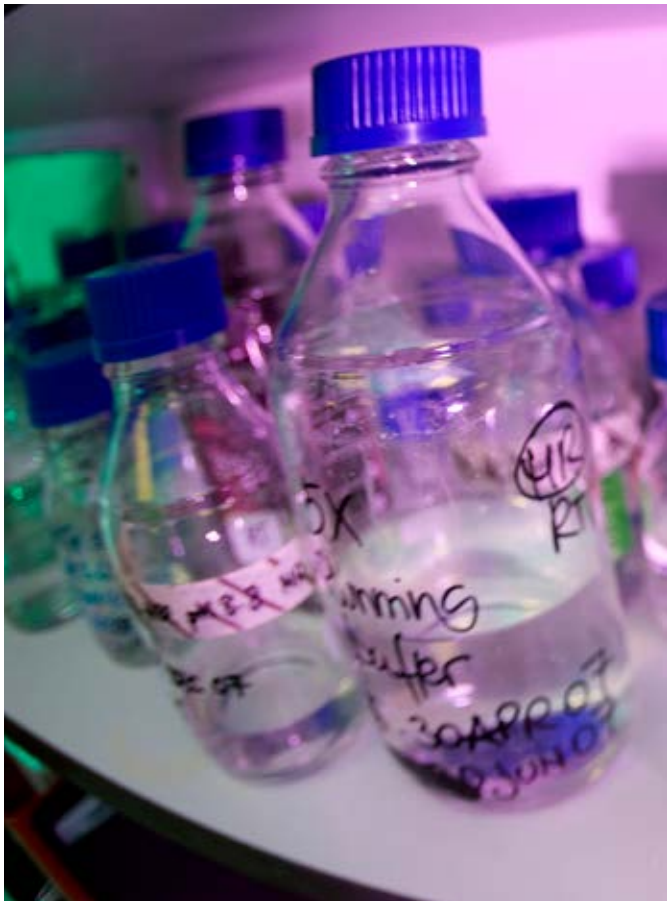
The ASRU Compliance Team consists of a Principal Inspector, an Operational Inspector, a Senior Complex Cases Manager and administrative support. The Compliance Team supports inspectors during the investigation of potential non-compliance with the aim of promoting a robust, efficient and consistent national approach to cases. The Team advises on the appropriate investigation of cases and the proportionate application of sanctions. The Team reports directly to the Head of Policy and Administration

Business support

The ASRU Business Support Team is a dedicated resource providing business support to all operational staff and management. This includes:

- providing general support to inspectors and management;
- gathering and analysis of management information;
- providing a secretariat function;
- organising internal and external recruitment;
- organising ASRU training, events and conferences including external stakeholder events;
- conducting risk management including health and safety;
- collecting and administering the annual Return of Procedures exercise;
- managing procurement and general finance;
- collecting licence fees;
- assisting with the roll-out of the e-licensing system, ASPeL.

During 2015 the Business Support Team comprised one Senior Manager supported by two Executive Officers.



The Inspectorate's role

Inspectors act as professional advisers to the Secretary of State. They play a key role in the implementation of the controls of scientific procedures on animals covered by ASPA. Their work is split broadly into thirds between their commitments to:

- inspection;
- licence assessment; and,
- providing operational and strategic advice.

All inspectors are registered veterinary or medical practitioners who have first-hand experience of biomedical research and possess higher scientific or clinical postgraduate qualifications.

At the end of 2015 the Inspectorate comprised 19 individuals, including the Chief Inspector. During 2015 the average resource assigned to normal inspection duties (including licence assessment) was 17.1 full-time equivalents (FTEs).

Section 2: The regulatory framework

The UK regulatory framework is underpinned by the Animals (Scientific Procedures) Act 1986 (ASPA), which was amended by transposition of Directive 2010/63/EU in January 2013. The standards associated with the Act and guidance on its administration and enforcement are provided in the *Code of Practice for the housing and care of animals bred and supplied or used for scientific purposes (the Code of Practice)*[2] *and the Guidance on the Operation of the Animals (Scientific Procedures) Act 1986* (the Guidance)[3] respectively. Both documents are publicly available and support establishments in understanding ASPA and how to be compliant.

As the transposed Directive was embedded into ASPA the Animals in Science Regulation Unit (ASRU) made a commitment to publish further Advice Notes as required. The Advice Notes complement the Guidance and provide further explanation where required. To ensure that they meet this aim the Advice Notes have generally been drafted with input from many sources including:

- the biosciences sector;
- representatives of licensed establishments;
- animal welfare and protection groups;
- subject-matter experts;
- the ASRU Inspectorate;
- other government departments; and,
- the Animals in Science Committee.

Re-homing and setting free Advice Note

This Advice Note, published in October 2015, expands on the information already provided in the Guidance (Section 5.21) about the legal requirements relating to re-homing and setting free, including release for humane slaughter of food-producing animals, and advice on current good practice. It has four main aims:

- to encourage the consideration of opportunities for re-homing and setting free suitable animals;
- to clarify the legislative framework under which consent to re-home or set free can be obtained;
- to provide advice on an effective Animal Welfare and Ethical Review Body (AWERB) policy for re-homing and setting free; and,
- to describe the current processes used by the Home Office for re-homing or setting free protected animals.

Use, keeping alive and re-use Advice Note

Under ASPA, the ‘use’ of an animal involves one or more regulated procedure applied for a particular purpose. This ‘use’ lasts from the time the first regulated procedure is applied to that animal until the completion of observations or collection of data or products for that particular purpose. At the end of each use, a decision must be taken as to whether the animal can be kept alive.

2 https://www.gov.uk/government/publications/code-of-practice-for-the-housing-and-care-of-animals-bred-supplied-or-used-for-scientific-purposes

3 https://www.gov.uk/government/publications/operation-of-aspa

This Advice Note aims to explain the interpretations of the terms 'use', 're-use' and 'continued use' under ASPA and to provide further guidance on the criteria that must be satisfied to keep animals alive at the end of their use. The Advice Note will assist establishments in their decision making and provides a source of information to ensure compliance with ASPA.

Harm–benefit analysis Advice Note

The harm–benefit analysis, conducted by Home Office inspectors, is the cornerstone of the licensing system for the use of animals in science. Only once the harms, benefits and likelihood of delivery have been fully explored by the inspector, including the extent to which the effective implementation of the 3Rs – replacement, reduction and refinement – has been addressed, is a judgement made as to whether the likely harms are justified by the likely benefits.

Appendix I of the Guidance provides an explanation of what the harm–benefit analysis is. However, it does not describe how it is done (the operational process). This Advice Note provides greater openness and transparency of the process and sets out the way in which ASRU delivers requirements under ASPA. The document should be useful to establishments and project licence holders considering a project licence application and it is publicly available.

Patterns of low-level concerns Advice Note

In 2014 the Animals in Science Committee (ASC) published; *Lessons to be learnt, for duty holders and the regulator, from reviews and investigations into non-compliance.*[4] This report demonstrated that achieving compliance is not just about knowing what has to be complied with, but is determined by a more complex mix of culture, good governance and process.

The ASC identified that if early indicators of poor compliance (patterns of low-level concerns) could be defined, this would support the Inspectorate and also establishments in monitoring compliance frameworks. ASRU took forward the ASC's proposal and developed the following Advice Note; *Identification and Management of Patterns of Low-Level Concerns at Licensed Establishments.*[5]

This document does two things:

- it provides information on indicators of compliance for establishment licence holders to use as part of their assessment of the effectiveness of their governance systems; and,
- it describes the approach that is taken when inspectors identify low-level concerns.

The document therefore supports establishments to deliver high levels of compliance through the consideration of risk factors.

Effective breeding of genetically altered animals Framework

Creating and breeding genetically altered animals (GAAs) now accounts for half of all scientific procedures, the majority (91%) of which are mice. It is therefore timely that ASRU has developed a framework to assist establishments to self-assess their practices around the breeding of genetically altered mice in order to identify strengths and areas for improvement.

By working closely with experts, user establishments and other organisations ASRU has built a framework that includes best practice and expert knowledge. The framework is not mandatory, but aims to provide a tool to establishments for better embedding the 3Rs within their organisation.

The framework is being piloted at the end of 2015 and during 2016 and will be published at full roll-out, after it has been tailored through the pilot.

4 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/326003/ASClessonsToBeLearnt2Jul14.pdf
5 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/512098/Patterns_low-level_concerns.pdf

Household Products Ban

As science has advanced over recent years, so also has the validation of alternative approaches to assessing product safety without resorting to animal testing. In particular, the need to test finished household products in animals is now generally accepted to be no longer necessary, and the testing of ingredients may often be questionable.

Therefore on 1 November 2015 a new policy was introduced banning the testing of finished household products on animals, and the testing of ingredients unless required by regulations (requiring retrospective notification) or in exceptional circumstances, which would require prospective authorisation.[6]

The policy was developed in consultation with stakeholders from both industry and animal welfare and protection groups. This ban is the first of its kind in Europe and aims to balance animal welfare without creating a regulatory burden that may drive testing overseas where animal welfare standards may be lower.

Since the implementation of the ban ASRU has been collecting information regarding the types of regulatory testing that is being carried out on ingredients. This will be published in due course.

Animals containing human material

In 2011 the Academy of Medical Science (AMS) published a report suggesting that the need for clearer guidance on the use of animals containing human material (ACHM) was becoming a pressing matter.

The use of ACHM can provide new insights to develop medical and other scientific advances. Such use is long established in biomedical science. However, there are important moral and ethical issues associated with the use of novel developments and technologies in this area and advances (such as stem cell science) are rapidly increasing the sophistication of these approaches.

The AMS recommended that ACHM research should be classified in three categories to determine the level of regulatory scrutiny required prior to authorisation. The ASRU guidance, finalised during 2015, sets out examples of these categories and how research under each will be dealt with.

- Category 1 – the majority of ACHM experiments that do not present issues beyond those of the general use of animals in research. These experiments will be subject to the same oversight and regulation under ASPA as other animal research.
- Category 2 – includes ACHM research that may be permissible, subject to a positive harm–benefit assessment and additional specialist scrutiny by the Home Office advisory body, the ASC, which is the national expert body.
- Category 3 – covers a very narrow range of experiments that should not, for now, be licensed because they either lack compelling scientific justification or raise very strong ethical concerns.

This guidance[7], published in February 2016, did not introduce any new regulations. It was developed in conjunction with the Department of Health to signpost the various regulations that need to be considered when carrying out work on animals containing human material.

6 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470007/Advice_Note_on_Household_Products_Ban.pdf

7 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/491496/Animals_Containing_Human_Material_Final_Guidance.pdf

Working with the EU Commission

The Directorate-General for the Environment in the EU Commission is responsible for ensuring the Europe-wide implementation of Directive 2010/63/EU. During 2015 senior representatives from ASRU, as the UK competent authority, attended a number of meetings in Brussels.

There were two National Contact Point (NCP) meetings, one each in March and October in 2015. Updates were provided by all EU Member States on their transposition of the Directive. These covered areas such as statistics and retrospective assessments.

European Citizens' Initiative

A European Citizens' Initiative is an invitation to the European Commission to propose legislation on matters where the EU has competence to legislate. In order to be considered, a Citizens' Initiative must be backed by at least 1 million EU citizens coming from at least 7 of the 28 member states.

On 3 March 2015 a European Citizens' Initiative was submitted to the European Commission, signed by 1.17 million citizens. It asked the Commission to abrogate Directive 2010/63/EU and put forward proposals to phase out the practice of animal testing and replace it with the compulsory use of data directly relevant for the human species.

On 15 June 2015 the Commission responded stating that it shared the concerns set out by the Initiative. However, it did not share the view that scientific principles invalidate the animal model nor did the Commission consider that animal experimentation posed an obstacle to developing validated alternatives. The Commission stated its belief that there is a continued need for the Directive to ensure a high level of protection to animals. Indeed, the Commission found that to abrogate the Directive would deregulate such experiments, make the animals concerned more vulnerable, and hinder the development of alternatives. Furthermore, the Commission stated that the Directive has not been in force long enough to draw conclusions on its effectiveness.

The Commission proposes to take the following four actions in relation to the Initiative to accelerate the development and uptake of non-animal approaches in research and testing.

- Accelerate progress in the 3Rs through knowledge sharing. The Commission will analyse technologies, information sources and networks from all relevant sections with a potential impact on the advancement of the 3Rs and present an assessment of options for knowledge sharing by the end of 2016.
- Support the development, validation and implementation of alternatives to animal testing for regulatory and research use.
- Actively monitor compliance with the 3Rs and the correct enforcement by Member States.
- Engage the scientific community and relevant stakeholders in debate, through a conference, to exploit advances in science for the development of scientifically valid non-animal approaches and advance towards the goal of phasing out animal testing.

The UK is in full agreement with the Commission that the Initiative was incorrect in its assertion that scientific principles invalidate the 'animal model'. ASRU published an Explanatory Memorandum[8] stating its support for the Commission's actions. As a global leader in the 3Rs ASRU is keen to share its knowledge and experience with Member States.

8 http://europeanmemoranda.cabinetoffice.gov.uk/memorandum/communication-from-the-commission-on-the-european-citizens-initiative-stop-vivisection

Working with the Animals in Science Committee

The Animals in Science Committee (ASC) is an independent, non-executive, non-departmental public body convened under Sections 19 and 20 of ASPA (as amended).

The ASC is responsible for providing impartial, balanced and objective advice to Ministers on issues relating to ASPA. At all times, the Committee must take into account both the legitimate requirements of science and industry and the protection of animals against avoidable suffering and unnecessary use in scientific procedures.

The ASC has provided advice on the various Advice Notes produced by ASRU. In particular The ASC provided advice on the Government's policy options on proposals to ban the testing of ingredients of household products on animals.

In 2015 ASRU published an Advice Note on the harm–benefit analysis. The Advice Note supports the present ASC review of the way in which the harm–benefit analysis is currently conducted. The ASC intends to provide advice that will provide advice that will support improvements to the rigour and transparency of current processes.

ASPA places a requirement on the ASC to engage in the promotion of best practices between Animal Welfare and Ethical Review Bodies (AWERBs). ASRU has supported the ASC in developing an AWERB 'hubs' liaison network to facilitate this process.

The ASC has a responsibility to review project licences concerned with severe procedures that include specially protected species: namely; non-human primates, cats, dogs and horses. The ASC is reviewing how it can maximise the effectiveness of this expert scrutiny of licence applications. During the year the ASC provided the Home Office with review of four such project licence applications.

Further details of these ASC initiatives can be found in the ASC Annual Report 2013-2014 on the ASC website: https://www.gov.uk/government/organisations/animals-in-science-committee

Annual Statistics Report for 2014

In October 2015 the 2014 *Statistics on Scientific Procedures on Living Animals* were published[9]. In recent years, these statistics have been published in July. However, 2015 was exceptional due to the introduction of a new Return of Procedures form for 2014 that met the requirements of European Directive 2010/63/EU.

For the first time establishments were required to report on the actual severity of all procedures and were asked to report on the number of procedures completed (retrospective) rather than the number started (prospective).

9 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/469508/spanimals14.pdf

Section 3: Licensing

The framework

The UK's three-tier licensing system provides a framework for authorising research using animals. It ensures that animal research and testing is only undertaken where no practicable alternatives exist and under rigorous controls where suffering must be kept to a minimum.

The Animals in Science Regulation Unit (ASRU) administers the licensing function under the Animals (Scientific Procedures) Act 1986 (ASPA). The licensing framework comprises the following requirements:

- the place at which the work is carried out must hold an '**establishment licence**' **(PEL)**;
- the programme of work in which the procedures are carried out must be authorised in a '**project licence**' **(PPL)**;
- those carrying out procedures must hold a '**personal licence**' **(PIL)**, which ensures that those working with the animals are qualified and suitable.

ASRU currently licenses and regulates 173 establishments. These are predominantly in the pharmaceutical, biotechnology and contract research industries, and in academia (universities and research institutes). At the end of 2015 there were 2,658 active project licences and approximately 16,000 personal licensees.

Performance

Establishment licences – During 2015 one new application was received. Five new licences were granted and issued (a carryover of four from 2014) and five licences were revoked at the licence holders' request .

Project licences – During 2015, 559 project licences were granted, of these, 540 (97%) were granted within 40 days target and 553 (99%) within 55 days. This is an improvement on 2014 where 94% were granted in 40 days.

Personal licences – 3264 personal licences were granted in 2015. Using the Animals in Scientific Procedures e-Licensing (ASPeL), ASRU was able to achieve an overall rate of 99.9%of new personal licence applications granted within the 20-day target. ASPeL was unavailable for several weeks during the summer for system upgrading. Contingencies ensured that temporary paper licences were issued for those with a pressing need and these were later converted to e-licences. The provision of a licensing service was not affected whilst ASPeL was unavailable.

Stakeholder engagement

The engagement of licence holders with ASRU's Licensing Team continues to play an important role. Establishments have welcomed visits from members of staff from the Licensing Team through their Single Point of Contact (SPoC) roles and this has assisted in building stronger bonds and greater understanding of the work undertaken on both sides.

The Home Office Liaison and Training Information Forum (HOLTIF) continues to be a very effective platform for establishments and licensing staff to come together to discuss mutually relevant topics to enhance an improved relationship.

Animals Scientific Procedures e-Licensing

ASRU continues to see significant benefits from its ASPeL system, especially in the processing times for PIL applications (within the internal 20-day target).

Conversions

In 2014 ASRU began the conversion of all paper PILs into an electronic format on ASPeL. The programme has continued in 2015. Establishments have been using this process to review the personal licences they hold and this has resulted in 3,399 revocations undertaken by the Licensing Team at the request of the licence holders. ASRU is supporting establishments by producing comprehensive lists of PIL holders for Home Office liaison contacts (HOLCs) to compare with their records. ASRU has also offered extensive guidance on the use of ASPeL where required.

As long as there are paper licences in existence, ASRU continues to run a dual licence system. The aim is to complete the PIL conversion during 2016. ASRU has contacted those PIL holders who have yet to convert to an e-licence as part of the routine five-year PIL review.

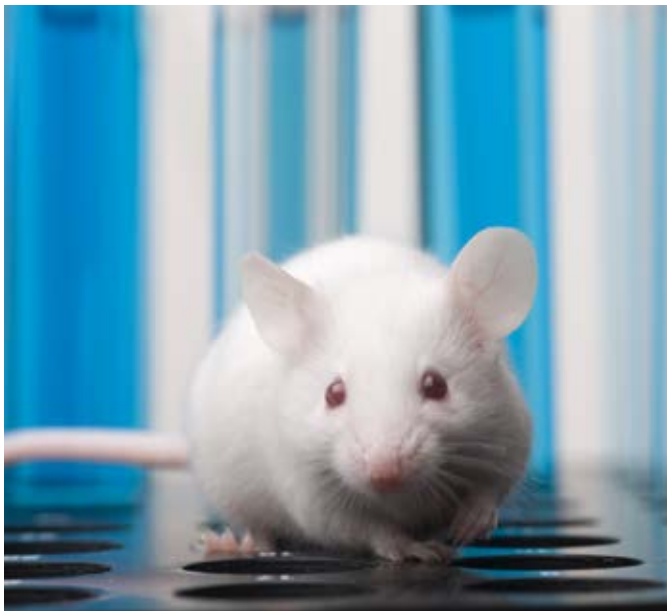
Project licence pilot

In November 2015 ASRU launched the pilot for the new PPL process. There are 16 volunteer establishments taking part and this has facilitated the early identification of issues that need to be addressed. As a result of the invaluable feedback received from stakeholders, ASRU is working with developers to introduce a number of system improvements.

A number of workshops took place throughout the UK during 2015 to demonstrate the new functionality, answer questions and collect feedback. This collaborative approach has been well received by establishments and ASRU will continue to provide support as required.

As part of the PPL pilot, user guidance is being compiled and this will be made available before go-live. In addition to this, a new version of the application form will be uploaded on to the gov.uk website and this may be used to complete the form offline (in draft) if required before copying into ASPeL. Stakeholders will be informed in advance when these are available.

The next release of the PPL process is planned for the end of May 2016 when ASPeL will become more widely available to establishments for PPL applications.



Section 4: Promoting the 3Rs and wider projects

The delivery report

In April 2015 the Animals in Science Regulation Unit (ASRU), together with the Department for Business, Innovation and Skills and the Department of Health, published their joint delivery report: *Working to reduce the use of animals in scientific research*[10]. This followed on from the *Delivery Plan*[11] published in February 2014 and summarised the progress made during the intervening year in delivering the three strategic priorities:

1. advancing the use of the 3Rs – replacement, reduction and refinement – in the UK;
2. influencing the uptake and adoption of the 3Rs approaches globally; and
3. promoting an understanding and awareness about the use of animals where no alternatives exist.

The UK's demonstrable progress against the three objectives, as set out in the Delivery Report, also includes a number of new initiatives that have been launched since the original plan was published.

Influencing the uptake of the 3Rs globally

The UK scientific community is a global leader in promoting and implementing the 3Rs. ASRU is committed to using this expertise to influence the uptake and adoption of 3Rs approaches globally through international engagement. Its work focuses on realising benefits for the UK in three areas:

- the **ethical** benefits of promoting the 3Rs to reduce animal testing globally and raise global welfare standards;
- the **scientific** benefits of enhanced opportunities for international collaboration (for example, through compatibility of welfare standards and ethical decision making); and
- the **economic** benefits that come from removing barriers to trade and enabling more streamlined studies (for example, accelerated drug approvals and opening markets for cosmetics).

10 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417441/Delivery_Report_2015.pdf
11 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277942/bis-14-589-working-to-reduce-the-use-of_animals-in-research.pdf

ASRU has worked very productively with colleagues in China where the Chinese Association for Laboratory Animal Sciences (CALAS) has made good progress in developing welfare standards for research animals that embrace the principles of the 3Rs. In addition, animal testing is mandatory for certain cosmetics and China's lack of engagement with the Organisation for Economic Co-operation and Development (OECD) Mutual Acceptance of Data (MAD) system results in unnecessary duplication of animal studies. ASRU's close co-operation with the China Food and Drugs Administration (CFDA) as well as other partners such as Cosmetics Europe and DG GROW in Brussels, and the UK the Medicines and Healthcare Products Regulation Agency (MHRA) in the Department of Health, have enabled good progress on all fronts.

In March 2015 ASRU ran a second UK–China International Seminar in co-operation with the sub-committee of CALAS developing the new national standards. This followed the success of a similar event in 2014 and brought together expert speakers from the UK, EU and USA to promote the uptake of the 3Rs. The national standards are now completing the process of formal approval to enable them to be incorporated into new regulations as part of the 13th 5-year plan (2016–20) for the Government in China.

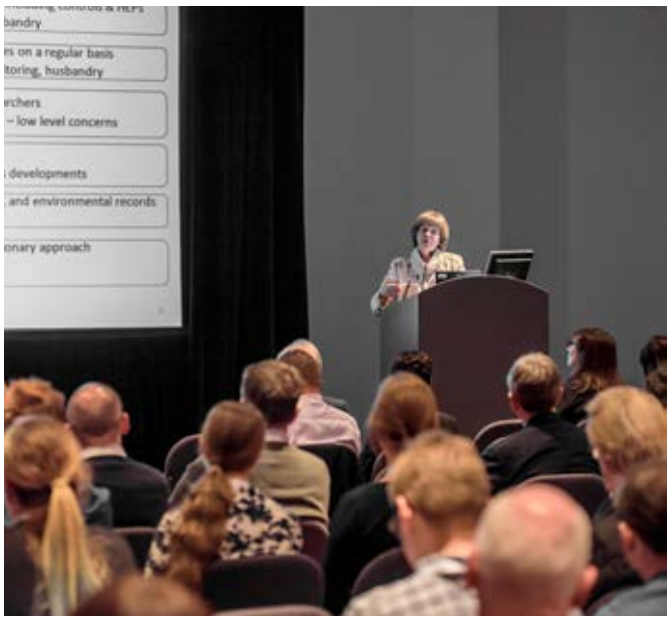
In March ASRU also ran, in association with the Cosmetics Division of CFDA, the European Commission and several UK and EU cosmetics companies, a one-day workshop on the safety assessment of cosmetics avoiding the need for new animal test data. This was targeted towards senior regulators in CFDA who supervise the assessment of safety dossiers. This event was so successful that ASRU was invited to run a 3-day workshop in November for over 100 regulators from across China. At the same time, Memoranda of Understanding were signed to take this work forward during 2016. The aim is to support the developing confidence of regulators, laboratory staff and Chinese cosmetics companies in this approach, and to give some assurance to Chinese consumers that they can have confidence in non-animal testing.

ASRU has also worked with the Pharmaceuticals Division of CFDA and the MHRA to pursue adoption by China of the OECD MAD scheme. This will result in eliminating unnecessary duplication of animal tests conducted both in China and elsewhere, including in the UK.

2015 also saw the start of ASRU's co-operation with Brazil's National Council to Control Animal Experimentation (CONCEA), which is committed to promoting the 3Rs through Animal Welfare Committees (CEUAs) in each research establishment in Brazil. In November, in association with NC3Rs, ASRU took part in a CONCEA Symposium in Brasilia where it led an interactive session to develop the skills of CEUA members in applying the 3Rs to ethical review.

During an earlier visit by Professor Robin Grimes, Chief Scientific Adviser in the Foreign and Commonwealth Office, an agreement had been signed with the Minister of Science, Technology and Innovation (MSTI) to collaborate over research into promoting the 3Rs. ASRU met senior officials of MSTI, the National Network on Alternative Methods (RENAMA), and the regulatory body responsible for safety (ANVISA) as well representatives of cosmetics companies, animal protection organisations, and the Brazilian Centre for the Validation of Alternative Methods (BraCVAM). Brazil has one of the world's largest cosmetics and pharmaceutical industries, as well as a significant academic sector, and there is great scope to implement alternatives and the 3Rs but also significant challenges.

Through ASRU's international work, the UK is increasingly seen as an important partner in improving research animal welfare globally through promoting the 3Rs in a science-led approach.



The Chief Inspector, Sue Houlton, presenting at the Institute of Animal Technology Congress, talking about the role of Inspectors.

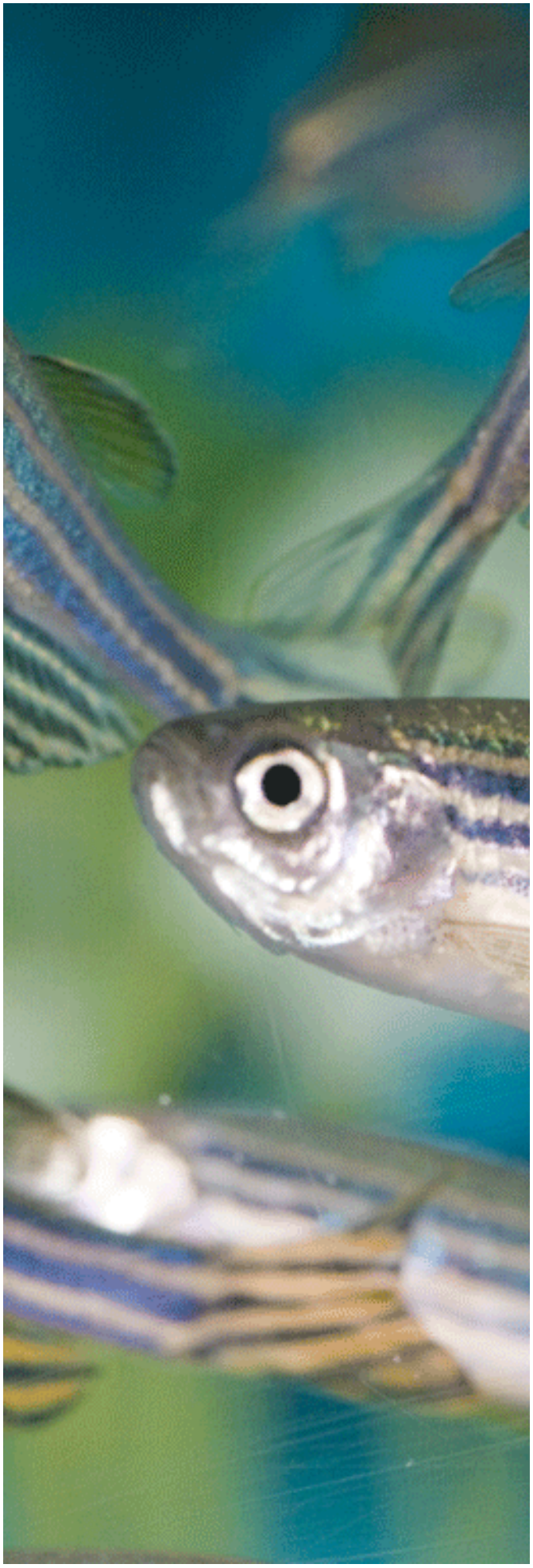
Work with the National Centre for Replacement, Refinement and Reduction of Animals in Research

The NC3Rs is the UK national organisation for the discovery and application of new technologies and approaches to replace, reduce and refine the use of animals for scientific purposes. The NC3Rs is an important stakeholder organisation for ASRU to engage with.

NC3Rs colleagues have continued to contribute to ASRU in-house training events to establish strong relationships with inspectors and to support the need for the 3Rs being fully considered in project licence applications. The on-going link between NC3Rs and ASRU ensures the inspectorate is well placed to disseminate 3Rs knowledge to the science community. As part of our on-going engagement, ASRU supports NC3Rs' initiatives including the annual prize giving which was attended by several members of ASRU.

In 2015 ASRU collaborated with the NC3Rs on the development of the Coalition Commitment: 'Working to reduce the use of animals in scientific research'. The NC3Rs delivered significant progress on its actions in both the first and second of the strategic priorities: 'Advancing the use of the 3Rs in the UK'; and, 'Influencing the uptake and adoption of 3Rs approaches globally'.

ASRU's international work promoting the 3Rs in China and Brazil has been strongly supported by colleagues in NC3Rs by giving advice, joining ASRU on overseas visits, and providing material for translation and distribution at events organised by ASRU.



Section 24

Section 24 of the Animals (Scientific Procedures) Act 1986 (ASPA) makes it an offence for information, gained in confidence, to be released unless it is for the purposes of discharging their functions under the Act. A consultation was run in May–June 2014 regarding suggested changes that might be made to make Section 24 more aligned with modern approaches to freedom of information. The consultation indicated that across the diversity of ASRU stakeholders there was largely support for changes being made to increase openness and transparency about the use of animals in research.

The review of Section 24 is very much informed by provisions within the Freedom of Information Act. In July 2015 the Cabinet Office announced its intention to review the Freedom of Information Act and therefore, whilst this review was in progress, it was inappropriate to comment on plans for changes to Section 24 until it had reached a conclusion. Once there is clarity on the Freedom of Information Act review ASRU will be in a better position to consider how this impacts on the Government's review of Section 24. It was not therefore possible to make further progress during 2015 in spite of the best intentions on all sides.

Section 5: Engaging with stakeholders

Communications

The Animals in Science Regulation Unit (ASRU) has a key role in supporting Ministers in providing well-evidenced and fully considered responses to Parliamentary Questions (PQs), Freedom of Information Act 2000 (FOI) requests and correspondence from the general public on any issue related to the use of animals in science. PQs and correspondence are an important way in which the Government communicates current policy and thinking.

Correspondence

During 2015 ASRU handled 412 pieces of correspondence. This included 8 FOI requests, 20 PQs, 181 items of Ministerial correspondence and 203 other pieces of correspondence.

Correspondents were concerned with a breadth of issues. Among these the main topics were:

- the previous Government's agreement to work to reduce the use of animals in research;
- the extent of the use of dogs and non-human primates in research; and
- the ban on testing of household products.

Parliamentary Questions

PQs represent a means by which Ministers can be held to account and provide an opportunity for scrutiny of operations. Since the answers become official Ministerial Statements, it is of paramount importance to ensure their accuracy. Answers must also be provided within a very tight timeline – often less than 24 hours. ASRU responded to 20 PQs in 2015.

Freedom of Information requests

ASRU received eight FOI requests on a variety of topics during 2015. In line with the Government's policy on openness and transparency ASRU's approach is to release as much detail as the legislation permits. In responding, ASRU seeks to provide greater transparency to assist public understanding whilst also balancing this against protecting personal details and information given to the Home Office in confidence, including proprietary rights and intellectual property.

Meetings with stakeholders

In support of ASRU objectives, the Unit's leadership held regular meetings with a wide range of stakeholders during the year. Maintaining these relationships is vital to help:

- inform ASRU policy decisions;
- understand the expectations and perspectives of ASRU's stakeholders; and
- receive valuable feedback.

The meetings covered matters related to:

- progress with the implementation of the revised regulations;
- updates on operational matters; and
- policy issues.

The meetings were with representatives from:

- industry, academia, government research institutes, medical research charities and research funders;
- animal welfare and alternatives (3Rs – replacement, reduction and refinement) groups;

- animal protection groups; and
- the Animals (Scientific Procedures) Act 1986 (ASPA) named persons and other professionals performing functions under the Act.

Other government departments

ASRU met periodically with other government departments and agencies including:

- the Department for Business, Innovation and Skills (BIS);
- the Department for Environment, Food and Rural Affairs (Defra);
- the Ministry of Justice (MoJ);
- the Medicines and Healthcare Products Regulatory Authority (MHRA);
- the Food Standards Agency (FSA);
- the Health and Safety Executive (HSE);
- the Human Fertilisation and Embryology Authority (HFEA);
- the Human Tissue Authority (HTA);
- the Medical Research Council (MRC); and
- the Veterinary Medicines Directorate (VMD).

ASRU also met with a range of non-governmental organisations (NGOs) and charities including:

- the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs); the Department for Environment, Food and Rural Affairs (Defra);
- the Wellcome Trust;
- the Royal Society for the Prevention of Cruelty to Animals (RSPCA);
- the Safer Medicines Trust; and
- the Dr Hadwen Trust.

These meetings were generally to discuss specific issues of mutual interest.

In addition, ASRU staff routinely join the Minister in meetings with stakeholder groups to provide advice as appropriate.

ASRU has been in active discussions with the Department for Business, Innovation and Skills (BIS) around the implementation of the Small Business, Enterprise and Employment Act (2015) and the 2016 Enterprise Act. Taken together these acts have three main impacts on regulators

- Determine how the Government's Business Impact Target of a £10 billion reduction in red tape for business will be distributed.
- The appointment of an appeals champion for each regulator or department.
- Increased reporting requirements including the need for economic impact assessments of new measures or guidance.

ASRU's work on Harm Benefit analysis continues to be excluded from the Growth Duty, allowing impartial assessment of the harms and benefits to be made.

Duty holder engagement

Engagement with those who hold a licence is an important aspect of ASRU's work. It allows us to explain our policies and plans, and to receive feedback on the quality of our work and delivery. Importantly, our on-going engagement is conducted through regular engagement at an operational level; between the ASRU Licensing Team and the Home Office Liaison and Training Information Forum (HOLTIF); and, at a strategic level between the ASRU Senior Leadership Team and the Establishment Licence Holders Forum.

Will Reynolds, Head of Policy and Administration, presenting at the Institute of Animal Technology Congress, discussing the roll out of the e-licensing system.

External representation

External representation and engagement with stakeholders, in the UK and internationally, is an important aspect of ASRU's work. This has been delivered by staff in all parts of ASRU including the Senior Leadership Team and inspectors.

Some highlights for 2015 include the following.

Institute of Animal Technologists
The ASRU Senior Leadership Team and inspectors gave presentations at the Institute of Animal Technologists (IAT) meetings and supported IAT workshops.

Laboratory Animal Science Association
An ASRU inspector has observer status on the Laboratory Animal Science Association (LASA) Council to facilitate the understanding and exchange of information between the two organisations. ASRU inspectors attend LASA meetings and have had significant involvement as part of the education, training and ethics (ETES) subsection of LASA. Presentations were made by ASRU's Leadership Team and inspectors at the Winter Meeting, including promulgating plans for the introduction of a new assessment tool to facilitate the efficient breeding of genetically altered animals.

ASRU inspectors and policy officials attended meetings of the Establishment Licence Holders Forum. Here they provided updates and insights into policy and operational matters as well as contributing significantly to the training day for newly appointed establishment licence holders.

Laboratory Animal Veterinary Association
An ASRU inspector has observer status on the Laboratory Animal Veterinary Association (LAVA) Council to facilitate understanding and exchange of information between the two organisations.

Three ASRU inspectors attended LAVA's annual conference providing presentations on the re-homing of animals, the re-use of animals, and the roles of named persons.

During the year both policy officials and inspectors advised on the development of a document on guiding principles for named training and competency officers (NTCOs), named information officers (NIOs) and Home Office liaison contacts (HOLCs) working under ASPA. This has been a joint venture between LASA, LAVA and IAT.

Royal Society of Biology

ASRU's joint meeting with the Animal Sciences Group of the Royal Society of Biology has become a regular annual event. In December 2015 topics covered:

- the ongoing implementation of the amended legislation, especially the revised annual returns process;
- a discussion of the recent review of ASRU's risk-based inspection programme; and
- a discussion of plans for reviewing aspects of project licence assessment process.

This meeting provides an excellent opportunity to engage face to face with duty holders and to discuss matters of mutual importance.

Royal College of Veterinary Surgeons

Members of the ASRU Inspectorate liaise with working groups from the Royal College of Veterinary Surgeons (RCVS) to ensure clarity of boundaries between their respective regulatory responsibilities and to minimise regulatory burdens.

International Engagement

The Head of ASRU spoke at a number of international conferences including:

- March 2015 – UK China 2nd Animal Welfare Seminar, Beijing
- May 2015 –Canadian Association of Laboratory Animals Conference, Montreal
- November 2015 – Joint UK-EU-China Cosmetic Safety Assessor Course, Beijing
- November 2015 CONCEA (National Council to Control Animal Experimentation) Symposium, Brasilia

Section 6: Compliance

A culture of care at an establishment starts with a culture of compliance. Significant responsibility is placed upon the Establishment Licence Holder (ELH) or, in the case of a corporate entity, the Named Person Responsible for Compliance to deliver this role, thereby promulgating an appropriate culture of care in meeting both the letter and the spirit of the law. The ELH must have in place robust systems and frameworks that support and encourage compliance. By so doing, they can prevent unauthorised procedures from being carried out at their establishment and ensure that all licensees comply with the terms and conditions of their licences (personal and project licences) when working at their establishment.

One key function of inspection visits is to determine whether establishments and licensees are complying with the provisions of the Animals (Scientific Procedures) Act 1986 (ASPA) and with the conditions of their licences. This is a statutory requirement under Section 18 of ASPA. ASRU inspectors report any non-compliance and make appropriate and proportionate recommendations for the action required. This is primarily aimed at the prevention of repeated similar failures. Inspectors also advise licensees and others on how to comply and generally promote a culture of compliance.

In most cases of non-compliance, the assigned inspector consults with colleagues and gathers sufficient information to determine whether there is a case that merits investigation. An initial report is then submitted to the Senior Licensing Manager within five working days of discovery. A full investigation report is usually submitted within 30 working days of discovery, together with a recommendation for action.

Those directly involved in the case will normally be notified by the inspector and, in writing, by the Senior Licensing Manager. They will be given the opportunity to provide any information that they wish to be considered before a decision is taken regarding the appropriate sanction. There is also the opportunity for appeal against some sanctions. In rare cases, an inspector may take a view early in the investigation that an offence has been committed that is sufficiently serious to merit referral for prosecution.

Details of the process for dealing with non-compliance can be found in the *Guidance on the Operation of the Animals (Scientific Procedures) Act 1986* (the Guidance), which was published in March 2014[12]. Complex or serious cases may take longer to resolve than the suggested timescales above.

Compliance advice

Compliance advice may be given verbally by an inspector upon discovery of a minor breach of licence conditions. In such cases there should be no disputed facts, no evidence of intent to subvert the controls of ASPA, no evidence to suggest that an offence has been committed, and no adverse animal welfare consequences. The breach should be resolved immediately or within a few days of discovery.

In 2015 there were 60 recorded incidents of compliance advice given by inspectors (down from 127 in 2014).

12 https://www.gov.uk/government/publications/operation-of-aspa

Non-compliance

Each case is considered with regard to the gravity of the non-compliance. An appropriate sanction is applied with the aim of deterring or preventing recurrence, and takes into account both aggravating and mitigating circumstances. The factors to be considered in any case of non-compliance include, but are not limited to:

- extent of unnecessary pain, suffering, distress or lasting harm;
- timeliness of resolution or remedy;
- risk of future similar non-compliances; and
- evidence of untruthfulness or attempts to evade responsibility.

In determining the sanctions to be applied, deliberate non-compliances will be viewed more seriously than those due, for example, to misunderstanding or adherence to inappropriate instructions from those in authority. Repeated failures will generally be viewed more seriously than single incidents. Any unnecessary animal suffering or attempts to conceal the facts may increase the gravity of any non-compliance sanction applied. A view will also be taken on whether or not the licensee is likely to observe their legal and administrative obligations in the future.

As set out in the Guidance the following range of sanctions is available to the Secretary of State.

- Letters of reprimand, with or without requirements for further action to correct perceived deficiencies which might include:
  - requirements for formal training or retraining;
  - requirements for altered management practices; and
  - amendments to licence authorities including the addition of special conditions;
- Revocation, suspension or amendment of licences;
- Requirements specified in a Compliance Notice (see below); and
- Referral to the prosecuting authorities.

In addition to sanctions, non-compliance may trigger more frequent inspection, or specifically focused inspection of an establishment as appropriate.

Those involved in non-compliances, either as the personal licensee, or as the relevant project or establishment licensee, will be notified that the ASRU Inspectorate has made a report and will be informed of the nature of the breach. Once non-compliance has been investigated, those involved will be invited to provide any information that they may wish to be considered in mitigation before a decision is taken regarding the appropriate sanction. If this includes variation or revocation of authorities, the right to make representations under Section 12 of ASPA will be explained.

Once dealt with, non-compliances are reported to the Animals in Science Committee (ASC).

In the most serious circumstances the Inspectorate will undertake a preliminary investigation sufficient to establish whether prosecution should or should not be considered. If prosecution is contemplated, such cases will be referred to the Crown Prosecution Service (in England and Wales) or the Procurator Fiscal (in Scotland). In addition to other factors, these authorities will consider whether it is in the public interest to pursue a prosecution.

ASRU is aware that awaiting the decision from the Secretary of State is a stressful time for a licence holder and ASRU's processes were reviewed in 2015 to help to conclude cases as swiftly as practicable and with proportionate sanctions. In 2015 the average time taken by ASRU to deal with reported cases of non-compliance was 11 weeks. This was calculated from the date that the non-compliance was reported by a licensee/establishment or

discovered by the assigned inspector, through to the date that the final outcome letter was despatched by ASRU on behalf of the Secretary of State. Complex cases take longer than straightforward cases, where the facts are agreed by all.

Compliance Notice

The amended ASPA provides for the issue of a Compliance Notice in the event of a breach of a licence condition, or a provision of ASPA, where ASRU requires a particular action to be taken to prevent further non-compliance. Such a Notice will specify the licence condition(s) or ASPA provision(s) that have been breached and will also specify:

- the action that must be taken to ensure that the failure is not continued or repeated; and
- any action that must be taken to eliminate or reduce any consequences of the breach.

The Compliance Notice will explain what will happen in the event of failure to comply, including possible revocation of a licence or licences. There is no provision in ASPA for appeal against a Compliance Notice. However, should the licence holder fail to comply, they may then be sanctioned with the suspension or revocation of their licence against which they can make representations under ASPA Section 12.

Compliance in 2015, self-reporting and a culture of care

In 2015, 55 cases of non-compliance were reported, fully investigated and completed:

- 38 (69%) occurred at universities;
- 4 (7%) at government research establishments;
- 8 (15%) at commercial organisations; and
- 5 (9%) at other types of establishments.

Of the 55 cases dealt with in 2015, 43 (78%) were self-reported. In 2014 and 2013, 49 (78%) and 21 (66%) of cases respectively were self-reported.

Table 1 provides a summary of the discovery of the cases of non-compliance for 2013–15 and Appendix 1 provides a summary narrative for each case in 2015.

Self-reporting is generally indicative of an establishment making efforts to ensure compliance. It indicates that an establishment is aware of its responsibilities and signals its intention to building a good culture of care. Where appropriate, self-reporting should be a part of normal practice within establishments and embedded within good governance frameworks. It can be considered a good indication that the trend of a significant proportion of self-reported cases has continued from 2014 to 2015. In such cases, either the non-compliant licence holder or another named person within the establishment reported the non-compliance to the Home Office. This was then investigated by an inspector.

Table 1 Discovery of cases of non-compliance in 2013–2015

	2013	2014	2015
Cases reported by the establishment	21	49	43
Cases discovered by an inspector	7	12	12
Cases reported by others independent of the establishment	5	2	0
Total cases	**33**	**63**	**55**

Publication of the Guidance on the Act in 2014 has helped to increase awareness among licence holders of their responsibilities under the amended ASPA. Likewise, ASRU colleagues have taken opportunities to give presentations on the new regulations, which have had a similar effect. ASRU is also aware that the reports it publishes about major or high-profile investigations are being used by duty holders to implement positive changes in the way that they approach compliance and establishing a culture of care. ASRU fully supports these trends and encourages duty holders to ask for advice.

ASRU has also been greatly encouraged that establishment licence holders (especially through the Establishment Licence Holders' Forum) are giving careful consideration to what a 'culture of care' means and how it can best be developed locally in establishments. The culture of an establishment, framed by behaviours and attitudes, is central to good compliance. The Act provides a framework of roles filled by named persons, as well as the Animal Welfare and Ethical Review Body (AWERB), all of whom are well positioned to support the ELH in delivering strong governance and leadership throughout even the most complex of establishments.

Key compliance messages

As in 2013 and 2014 a common cause of non-compliance in 2015 was that the details of the authorities granted in the personal or project licences had not been adequately checked. Failure to be familiar with authorities cannot be considered a mitigating factor. Licensees must be fully familiar with the details and authorities given in their personal licence and in the relevant project and establishment licences under which they are working.

As in previous years three common non-compliance themes emerged during 2015 (Figure 1):

- procedures conducted without licence authority;
- a failure to provide food and/or water; and,
- the unauthorised re-use of animals.

Knowledge of these themes should be used to understand better how to avoid non-compliance and support establishments in their frameworks for delivering requirements under ASPA. The case summaries of all non-compliances during 2015 have, where appropriate, been grouped under these themes, and are listed separately in Appendix 1.

- **Procedures conducted without licence authority**

Working without authority has occurred where either personal licence or project licence authorities were not in place. Causes included:

- a mistaken belief that project authority was in place;
- personal licensees were unaware that their licence had been revoked;
- a non-licensee was instructed, and allowed, to carry out a regulated procedure;
- a request by the holder to update a personal licence after the completion of modular training had not been submitted by the establishment to the Home Office for amendment.

This group included 25 cases (45%) of the total of 55 cases (see Appendix 1).

Root causes

The causes for these non-compliances were:

- administrative lapses and error;
- inadequate or inappropriate record keeping; and
- a lack of communication amongst key personnel.

The primary responsibility for ensuring compliance with licence authorities rests with the individual licence holder. Licensees should be sure of their authorities before carrying out regulated procedures on animals.

- **A failure to provide food and/or water**

Failure to provide food and/or water to animals as part of normal husbandry and care is unacceptable. It is therefore of utmost importance that establishments have robust procedures in place to ensure the provision of food and water to animals kept under the terms of ASPA. Of the total 55 cases, 12 cases (22%) fell under this theme (see Appendix 1) and in the majority of these incidents animals died as a result. Of these 12 cases, 9 (75%) occurred in the first half of 2015.

Because the numbers of cases in this category was relatively high in 2014, and were again looking to be high during the course of 2015, inspectors reminded all establishment licence holders and other named role holders of the need to have in place adequate procedures and systems to minimise the likelihood of such incidents occurring. ASRU believes the main reason for the significant reduction in the numbers of such cases in the second half of 2015 was the successful uptake of this message.

Root causes

The primary reasons for failure to provide food and water are related to the effectiveness of routine checks of animals to spot both lack of provision and the declining condition of the animals. The ability of an establishment to conduct full and proper checks, as required by ASPA, is related to both staffing resource and the ease with which staff can readily view and assess the animals and their environment. Staff resource may be over-stretched during busy times and out-of-hours, such as weekends. Proper provision for training, competence assessment and supervision should be incorporated into management systems. It is also notable that checking the well-being of animals housed in cages on ventilated racks, and ensuring food and water provision, may take longer than for animals in open cages. Allowance must be made for this.

- **The unauthorised re-use of animals**

The 'use' of the animal involves one or more regulated procedures applied for a particular purpose and lasts from the time of the first regulated procedure on that animal until the completion of observations or collection of data or products for a particular purpose. At the end of each 'use', a decision must be taken as to whether the animal can be kept alive. Any animal that, in the opinion of the personal licensee or the veterinary surgeon, is suffering or is likely to suffer as a result of the regulated procedures at the end of its 'use' must be killed. 'Re-use' is explained in the Home Office Guidance on the Operation of the Animals (Scientific Procedures) Act 1986[13] (the Guidance) as the use of a protected animal that has already completed a series of regulated procedures for a particular purpose when a different animal on which no regulated procedure has previously been carried out (a naïve animal) could be used. It follows that the sole criterion for determining if an animal is being re-used is whether a naïve animal could be used for the second or subsequent use and still achieve the scientific objective.

- In relation to re-use under the new regulations, ASRU recognised that there was some confusion with a number of stakeholders and licensees. ASRU therefore drafted further guidance that was published in the form of an Advice Note (Use, Keeping Alive and Re-use) in October 2015. Of the total 55 cases in 2015, 4 cases (7%) were under this theme (see Appendix 1).

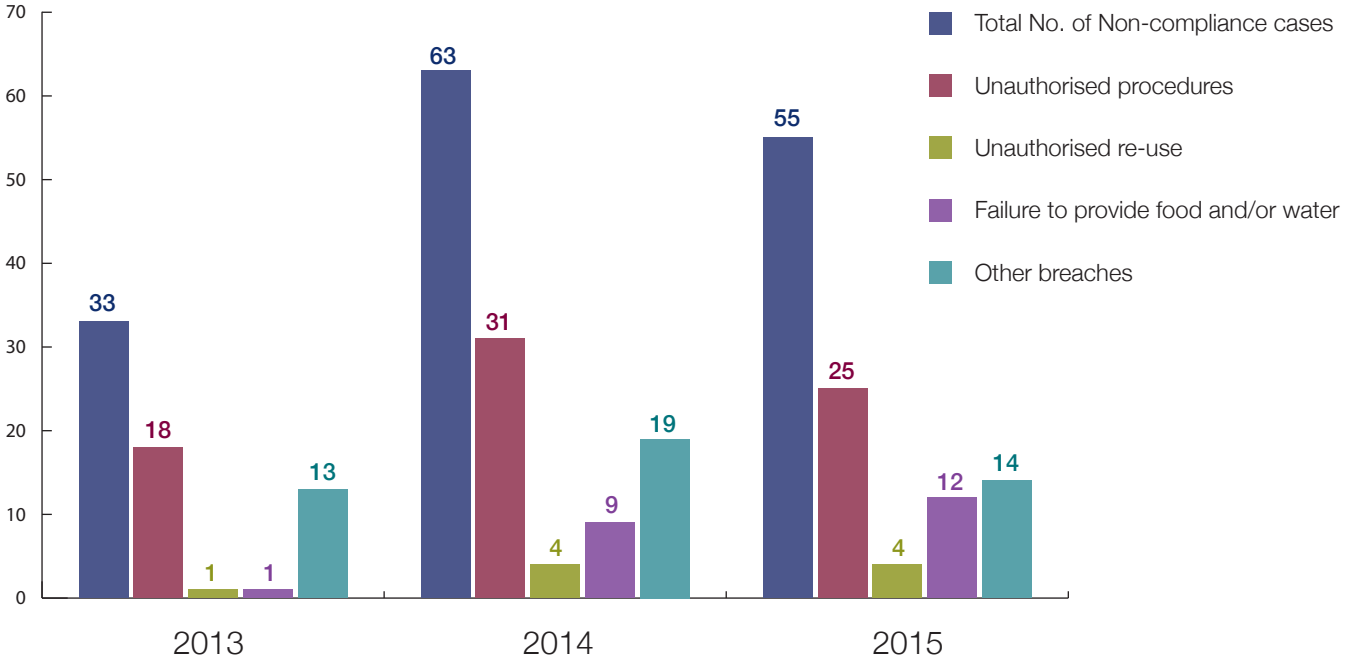
Root causes

The causes were typically:

- failings in communication between key personnel;
- staff and licensees who were unfamiliar with the controls and provisions of project licence authorities; and
- inadequate systems of record keeping.

13 https://www.gov.uk/government/publications/operation-of-aspa

Figure 1. Categories of non-compliance, by theme, 2013–15



Measures to prevent non-compliances'

There are a number of measures to safeguard against the above themes related to non-compliance, which all establishments should have fully in place. These are:

- good channels of communication at all levels in the establishment;
- proper supervision;
- effective training, including competence assessments;
- good administrative practices;
- a culture of checking licence authorities before starting any new set of experiments; and
- sufficient time and resource allocated for daily, meaningful routine monitoring of all animals.

In the first instance, the Guidance should be used as a resource and routinely followed. In this way, establishments should be able to assure themselves that they are conducting their work in a compliant way.

There was confusion with some establishment licence holders around the legal requirements for re-homing of animals and so ASRU drafted and issued guidance on this matter through an Advice Note (Re-homing and Setting Free of Animals) to all establishment licence holders in October 2015. This Advice Note explains the criteria required for the Secretary of State to consent to the re-homing or setting free of relevant protected animals that have been bred, supplied, kept or used in regulated procedures at the end of those procedures.

All duty holders should always fully check their licence authorities and the Guidance before starting any new work, and any queries or concerns should be fully explored and addressed with senior role holders and, if required, with the assigned ASRU inspector.

Transparency of major investigations

As well as investigating each non-compliance case, whether self-reported or discovered by an inspector, ASRU also initiates a number of more substantial investigations each year. These may be triggered by a number of factors including:

- an infiltration resulting in allegations in the public domain of poor practice;
- a cluster of non-compliances or 'near-misses' identified by inspectors;
- a non-compliance apparently involving significant animal harm;
- a publication that appears to describe unjustified pain, suffering or distress; or
- concern raised by inspectors or others that a particular procedure may be not be either the most refined or the most appropriate model for the purpose.

Such investigations are normally led by inspectors and result in one or more detailed investigation reports.

In the interests of transparency and openness, ASRU publishes anonymised reports of such investigations on gov.uk once they are completed. This is in addition to its usual reporting in this Annual Report. ASRU believes this will help to ensure that all stakeholders can learn from the outcomes of these investigations as early as possible and enable them to address any potential weaknesses in their own management systems, creating a cycle of continuous improvement. These reports also provide the public with an insight into this important aspect of ASRU's work.

In determining which reports to publish, ASRU applies a public interest test. All reports involving a significant compromise to animal welfare, or those in which there is clear evidence of deliberate intent to deceive, are normally published. In cases where the ELH is found to have failed to comply, it is likely that the issues will be wide-ranging within the establishment and ASRU will normally publish those reports to offer useful lessons to others. In the interests of transparency, ASRU expects a decision not to publish a major report to be the exception.

Links to the reports and a summary of the lessons learnt can be found here: https://www.gov.uk/government/publications/compliance-investigations-by-the-animals-in-science-regulation-unit

Section 7: Inspection

The inspection role of the Animals in Science Regulation Unit's (ASRU's) Inspectorate is key for the protection of animals used for experimental or other scientific procedures. Inspectors visit all establishments licensed to breed or supply animals, or to carry out regulated procedures on animals under the Animals (Scientific Procedures) Act 1986 (ASPA) in England, Scotland and Wales. The purpose of inspection is to provide reassurance to Ministers and the public that the care of animals, and the experiments carried out, comply with the requirements of ASPA and the relevant conditions specified in licences.

2015 has seen changes in both inspection operations and personnel. A review of inspection operations was completed in the summer of 2015 and the implementation of its recommendations followed. These included:

- a strengthening of the risk management process;
- resetting the baseline inspections; and
- looking at specialised areas in more detail in the form of thematic inspections.

At the same time there were personnel changes taking place with two inspectors retiring and two others moving on. Recruitment to fill these vacancies is underway and the resetting of the baseline inspections and more focused risk management has managed capacity requirements in the interim.

Risk management

In 2015 ASRU put a more structured risk management process in place. This comprises of a review of the national risk picture being undertaken every quarter by the Chief Inspector and the principal inspectors. Prior to the meeting, the principal inspectors discuss the concerns, observations and findings of each of the inspectors reporting to them. These discussions identify the main concerns each inspector has regarding the institutions they inspect.

The quarterly review meetings gather together the inspectors' evaluation of the risk for their institutions and the results of the inspections of the previous quarter. Additional consideration is given to the incidence and nature of any non-compliances, new procedures, new species and any other relevant information. The principal inspectors compare and contrast the views of their inspectors and draw up a list of the major concerns and their relative significance.

The result of the meeting is a summary of the key evidence and an action plan as to how to resolve concerns. The action plan might include additional inspections but could include other measures, such as defined review points to assess progress and achievements. Usually additional inspection time is targeted to the specific concerns rather than necessarily a more general increase in the number of inspections to a particular establishment.

Baseline setting

Each establishment is assigned a baseline number of inspections. This number depends on a range of factors. The most significant factors are a measure of the size and complexity of the establishment and the type of work that is carried out there. This is done by drawing up the number of regulatory units that an establishment has (a regulatory unit is calculated from the number of individual licences at an establishment added to twice the number of project licences). Although other calculation methods might be chosen, in practice they tend to produce similar rankings. There are 8 bands of regulatory units (the largest band is greater than 1,500, the smallest less than 60); establishments in the same band are assigned the same base number of inspection days.

Other factors are then taken into consideration:

- Establishments with specially protected species are given additional inspection time.
- Establishments with access difficulties relating to their geography, may be given additional inspection time. There are two types of geographic difficulties:
  - establishments might be remote and difficult to get to; or
  - they may be difficult to get around because of multiple sites and/or biosecurity restrictions.
- The number of inspections at establishments may be increased or reduced because of their risk profile. Contract research organisations are given additional inspections as they tend to operate on relatively few project licences so the regulatory unit approach understates their inspection demand.

Inspection and inspector numbers

The Animals in Science Regulation Unit (ASRU) carried out 1,217 inspections of places where scientific work on animals was conducted in 2015. This is an 18 per cent reduction on 2014. Of the visits to animal units, 64.7 per cent were unannounced. This is a 3 per cent increase on 2014.

In contrast to 2014 when 5 new inspectors – 4.8 full-time equivalents (FTEs) – joined ASRU, 4 inspectors (3.6 FTEs) left in 2015. In 2014 the number of visits was high due to training the new inspectors and the consequent handover visits after they had been trained, as described in the 2014 Annual Report. In 2015 the complete opposite happened due to the departure of inspectors.

However, the new baseline setting and risk management system allowed the reduction in capacity to be planned in a co-ordinated way to ensure both minimal loss of coverage of the inspection programme and sufficient capacity to maintain the licence assessment programme. Although the inspection programme can be adjusted to changing resource levels, demand for the licence assessment does not change and inspectors' individual licensing workloads inevitably increase when inspectors leave.

Thematic inspections

Thematic inspections are a common feature of many inspection regimes. They provide a mechanism by which regulators can understand an issue in depth and ensure that consistent best practice is applied across their areas of regulation.

There are a number of specific drivers for thematic inspections in the area of animals in science.

- Sophistication of research – the increasingly sophisticated nature of biological research is one driver to move to this type of inspection. It is becoming increasingly time consuming for each inspector to understand fully the wide range of science that may be undertaken, in particular by a large institution, in sufficient depth to be able to evaluate critically all the work being done.
- Depth of experience – for the inspectors thematic inspections offer the opportunity to:
  - deepen their expertise in specific areas;
  - enhance their interaction with project licence holders;
  - develop a national perspective on particular research areas; and
  - increase the value of their inspections.
- Stakeholder engagement – for thematic inspections to work, the inspectors have to reach out to a wide range of stakeholders and specialist groups to ensure that their expertise and aims are current and relevant.
- Consistency – having a small group of inspectors who have seen all research of a particular type, science or disease and all the procedures used within that area is a sound basis for evaluating current practice and recognising and promoting best practice.

Promoting the efficient breeding of genetically altered mice

In January 2016 ASRU began trials of a new framework that promotes improved efficiency in the breeding of genetically altered (GA) mice. The framework was developed with the assistance of a large number of ASRU stakeholders, including research establishments and animal welfare and protection organisations. ASRU hopes that its use will be widely adopted by the end of 2016.

The project was initiated in late 2014, prompted by public and Ministerial concern about the annual increase in the numbers of GA animals bred and used. Focus groups with subject matter experts and user establishments determined the technical and organisational factors that influence the efficiency with which these animals are bred and used, and identified leading practice. Further collaboration with all ASRU stakeholders resulted in the production of an assessment framework, which was ready to be trialled in early 2016.

The aim of the framework is to assist establishments to self-assess their practices around breeding of GA mice in order to identify strengths and areas for improvement. ASRU envisages that it will be used by AWERBs and project licence holders to examine current practices, set up and assess outcome measures, and benchmark progress over time, helping them to meet their legal obligations to implement the 3Rs – replacement, reduction and refinement.

As well as being used for self-assessment, the framework will provide a consistent, UK-wide approach for ASRU's assessment of breeding practices. During 2016 ASRU inspectors will pilot the use of the framework in a small number of establishments. Based on the results of the pilot, adaptations will be made as necessary before a wider roll-out later in the year.

ASRU is very grateful to the experts and staff in establishments and organisations – many of whom are listed in the framework – who helped with its development, are assisting with the pilot, and continue to provide very useful feedback. There are no plans to make the use of this framework mandatory, and other methods of examining GA breeding practices resulting in 3Rs gains will also be welcomed by inspectors.

Promoting the refinement of animal models of sepsis and septic shock

The ASRU Inspectorate was involved in a working group set up by the Royal Society for the Prevention of Cruelty to Animals (RSPCA) in an initiative to identify ways to refine animal models of sepsis and septic shock, which is an area of research where there is the potential for high levels of suffering for animals. The working group comprised scientists with expert knowledge relevant to the field, veterinarians (including ASRU) and animal technologists. This culminated in a report published in the journal Shock in April 2015.

The report aimed to facilitate the implementation of the 3Rs in the use of animal models and procedures involving sepsis and septic shock. The paper identifies and discusses issues of animal welfare that arise in this type of research and proposes some practical measures to reduce suffering and generate more robust data from experiments. The paper includes some recommendations that represent the key points of the discussions.

Following this publication ASRU decided to undertake themed inspections in relation to use of animal models of sepsis:

- to ascertain whether and how refinements were being implemented at establishments in the UK; and
- to translate the advice of the working group on refinement and best practice into regulated work authorised in the UK.

In the second half of 2015 the work was scoped and a strategy devised for the inspection process based on the recommendations/key points in the working group paper. The establishments where project licences authorising use of models of sepsis were held were identified and arrangements made to carry out inspections when experiments were in progress. A template was constructed in order to facilitate between-establishment/ between-project licence comparisons.

In September 2015 the first themed inspection was carried out. This was well-received by the research group. Experiments were observed and the research discussed. Refinements that had been implemented during the course of work were reviewed and the potential for any further possible refinements in the future considered.

In 2016 the themed inspections will continue with the aim of completing an inspection of the major research groups by the end of 2016.

Section 8: Financial report

From 1 April 2015 the ASRU started operating on a full cost recovery basis, which intends that the licence fee income covers all expenditure incurred in delivering the service. In matching income to expenditure the licence fees were re-structured in 2015 as follows:

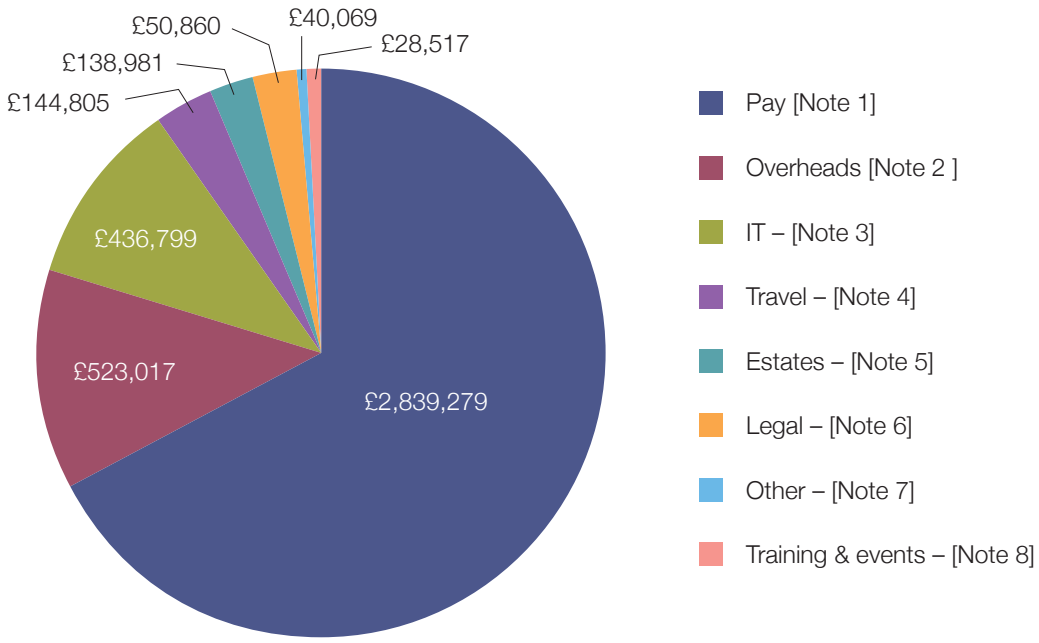
- personal licence increased from £226 to £242 per licence held;
- establishment licence increased from £252 to £631 per licence held;
- breeder/supplier only licence incorporated into the establishment licence fee so that there is no separate charge for those establishments that only breed or supply animals.

The fees had not been reviewed since 2007. Although the changes represent a 7 per cent increase in fees, the reality is an average annual increase of less than 1 per cent.

2015/16 Expenditure

Expenditure for 2015/16 (1 April 2015 – 31 March 2016) is shown in Figure 2.

Figure 2. Animals in Science Regulation Unit expenditure, 2015/16



Notes:

1. Of the £2,839,279 pay costs approximately £2.09 million was salary costs, £695,000 was NI/superannuation and £56,000 was spent on consultants and temporary agency staff to increase staff resource in the Licensing Team.

2. Central overheads are calculated on a headcount basis and cover core Home Office central functions/services such as IT delivery, HR and finance. It also covers an apportionment of the accommodation and facilities costs of the London Head Office at 2 Marsham Street. Overheads have increased from 2014/15 due to the inclusion of some Home Office Science Directorate costs and a new model of calculating central overheads.

3. The IT costs include approximately £183,000 spent on further development and testing of the Animals in Scientific Procedures e-Licensing system (ASPeL). The remainder is for telecoms and hosting and service support of ASPeL during 2015/16.

4. Travel (and subsistence) costs are mostly incurred by inspectors during their visits to establishments.

5. During 2015/16 ASRU paid rent, rates and service charges for the Shrewsbury office, although the lease was terminated in October 2015 so there will be no further costs. Payments were made to other parts of the Home Office and other government departments for the use of office space in Swindon, Glasgow, Dundee and Bedford.

6. Legal costs include the cost of defending judicial reviews and handling appeals against licensing decisions taken. ASRU claims costs against litigants wherever possible in order to mitigate the overall legal costs to be covered by fees.

7. Other costs include recruitment costs (for new inspectors) publications, fees, subscriptions to professional bodies, e.g. Royal College or Veterinary Surgeons and the General Medical Council, and office costs such as couriers.

8. Training costs are mostly incurred by inspectors completing their Continuous Professional Development as required by their professions (all inspectors are either veterinary surgeons or medical doctors). This includes the costs incurred by running four annual conferences for all inspectors and managers.

In addition to the fee-funded costs shown above, £250,000 was paid from central Home Office funds to the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs). This is with reference to ASRU's service agreement with NC3Rs which includes the following.

- Advice on specific project licence applications.
- Support for strategic funding calls to address specific 3Rs – replacement, reduction and refinement – topics and inform operational policy. Topics will be agreed with ASRU but administered and overseen by the NC3Rs and will be based on where inspectors have indentified a particular need for further information/guidance from assessing licence applications in their establishments.
- Support with developing the Animals (Scientific Procedures) Act 1986 (ASPA) Guidance and Advice Notes.
- Attendance at regular unit training events, workshops and those run for stakeholders.
- Sharing/access to information to develop best practice in establishments – acting as a source of information and expertise on the 3Rs to ASRU (particularly to inspectors carrying out assessments of project licence applications) and to licence applicants and establishment staff (including named information officers).

ASRU is currently reviewing the payment made to the NC3Rs and the service received, to determine whether or not this should be funded by fee payers instead of central Home Office funds from 2016/17. If this is to be the case it is not expected that fees should need to be increased to cover it.

2015/16 Income

When the forecasts were calculated for HM Treasury in summer 2014 as part of the full cost recovery preparations ASRU forecast that in 2015/16 there would be a 6 per cent drop in the number of licences held from 2014/15 due to the e-licensing conversion programme that started in 2014, so the fees were increased to account for this. ASRU knew that as establishments converted their personal licences to e-licences they would take the opportunity to check that all licences were required, and revoke those that were no longer needed.

Although this did happen there was actually only a 3 per cent drop instead of a 6 per cent drop as many establishments did not start converting their licences until 2015/16. Therefore there were more licences held than were forecast. However ASRU expects the number of licences held in 2016/17 to drop further as most establishments completed converting their licences during 2015/16 and did revoke more licences than normal.

Invoices are raised in arrears so income for the financial year 2015/16 has not yet been fully invoiced and received. Forecast income from fees is expected to be approximately £4.69 million and therefore we forcast to receive £482k more than was spent.

Income/expenditure for the last three years

The summary of income and fee-funded expenditure for the last three years is shown in Table 2.

Table 1 Discovery of cases of non-compliance in 2013 and 2014

	Income	Expenditure	Variance
2013/14	£4,111,570	£4,748,495	£(636,925)
2014/15	£4,380,206	£4,378,929	£1,277
2015/16	£4,690,000 (forecast)	£4,207,503	£482,497 (forecast)

In accordance with HM Treasury guidance the forecasted surplus for 2015/16 is acceptable because it was as a result of an increased number of licences held rather than expenditure being significantly lower than forecasted. As the number of licences is expected to decrease in 2016/17, due to the completion of the conversion to e-licences, under the full cost recovery model it would not be appropriate to decrease the fees as we would then be forecasting a deficit that would need to be covered by central Home Office funds.

Appendix 1: Cases of non-compliance

This section provides summaries of all 55 cases of non-compliance that were concluded in 2015.

In 2013 the Animals in Science Regulation Unit (ASRU) categorised cases of non-compliance according to their severity (these categories are explained in Appendix 1 of the 2013 ASRU Annual Report). Given the complexity of cases and the context in which they occur, ASRU determined that such categorisation was broadly unhelpful in terms of deciding appropriate sanctions or in explaining the rationale for these decisions. From 2014 ASRU therefore ceased assigning categories to cases and instead each case is considered on its own merits with regard to the severity of the non-compliance and hence the appropriate sanctions.

Section 1 of this Appendix describes those cases of non-compliance that are grouped under the three themes identified in Section 6:

- procedures conducted without licence authority;
- a failure to provide food and/or water;
- the unauthorised re-use of animals.

The examples under these themes should be used to understand better how to avoid these types of non-compliance and to support establishments in their frameworks for delivering the requirements under the Animals (Scientific Procedures) Act 1986 (ASPA).

The other 14 cases of non-compliance are described in Section 2 of this Appendix.

Section 1: Cases of non-compliance grouped under three common themes

1. Examples of procedures that were conducted without a licence authority

1. A personal licence holder performed regulated procedures on hamsters over a period of approximately six months without the necessary personal licence authority to do so. The incident came to light when the licence was being converted from a hard-copy paper licence to an e-licence and it was discovered that 'hamster' was not listed amongst the authorised species on the licence. The procedures conducted were otherwise competently performed with no avoidable welfare costs. Had the licence holder requested an amendment to their personal licence to allow for the use of hamsters then this would have been granted. The licensee was sent a letter of written reprimand, which was also recorded on their file and was expected to undergo retraining to refresh their understanding of the legislative requirements.

2. A personal licensee discovered a litter of ten newborn mouse pups that had not been bred intentionally. He attempted to kill the mouse pups using a rising concentration of carbon dioxide, which is not an appropriate method of Schedule 1 killing. Furthermore, the killing was undertaken without appropriate establishment, project or personal licence authority. The pups were not properly killed and the following morning a number were found to be still alive in the waste disposal bag. The personal licence holder's knowledge, training and supervision had not been adequately assessed and addressed after he had been trained elsewhere. The establishment

immediately acted to strengthen processes for the training and competency assessment of incoming staff trained elsewhere, which it considered would prevent further issues. The establishment licence holder and the project licence holder were each issued with a letter of written reprimand, which were also recorded on their files. The personal licence holder, who had been suspended from working with animals and whose licence had subsequently also been revoked at the request of the establishment licence holder, was sent a letter of censure, which was also recorded on his file.

3. Twenty mice were used in a surgical procedure in a manner that contravened an additional special condition imposed on the project licence. The condition was not adhered to because the project and personal licence holders failed to check properly through the licence conditions that were put in place when it was granted. The establishment licence holder's systems also failed to pick up the issue. The establishment licence holder, project licence holder and the personal licensee were each issued with a letter of written reprimand, which was also recorded on their files. Additionally, the project licence holder was required to retrain in modules 1 and 5 and the personal licence holder in module 1. Enhanced processes were put in place at the establishment; these ensured that licence holders always check and adhere to conditions applied to project licences before carrying out regulated procedures. This meant that further sanctions against the establishment licence holder were not required.

4. In August 2014, while testing a new vaccine candidate, an intramuscular route of injection was used in a group of four mice without the project licence authority to do so. Despite the mice developing swelling in the injected legs, becoming lame, and exceeding the severity limits on the protocol the animals were not culled. Lameness was not listed in the project licence as a potential adverse effect. In addition, no notification was made to the Home Office of the breach of the authorised severity. Upon discovery by the establishment licence holder, they took immediate steps to ensure that all project licence information was made readily available in each room in the animal unit for personal licence holders and animal technicians, to make clear what was permitted under the authority of every project licence. The project licence holder was sent a letter of written reprimand, which was also recorded on their file, and required to undertake modules 1 and 5 retraining within six months. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file, and required to undertake module 1 retraining within six months.

5. Blood samples for phenotyping purposes were taken from eight mice, four of which were genetically altered and had been genotyped by ear clipping on a previous occasion. Although the personal licence qualified the holder to undertake the blood sampling procedure, the project licence did not authorise either blood withdrawal for phenotyping purposes in addition to prior genotyping, or for blood withdrawal from wild-type mice. The animals experienced minor transient pain. The blood sampling procedures were organised by a personal licence holder who read the project licence before arranging for the procedure to be performed by another personal licence holder, but who failed to notice that the use of wild-type controls was not included in the protocol. The personal licence holder who conducted the procedure also failed to require the provision of a completed study plan before starting the procedure, which was in contravention of the establishment's measures to prevent the conduct of unauthorised procedures. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file.

6. Fish tagging procedures were performed at a place other than a licensed establishment (POLE) by a non-licensee who had applied for a personal licence, but submitted an incomplete application that had not been endorsed by the establishment's named training and competency officer (NTCO). The incident occurred between 26 March and 2 April 2014 and also between 1 and 30 September 2014, and was reported to the Home Office assigned inspector on 27 January 2015 while on a

routine inspection at the establishment. The techniques appeared to have been otherwise performed competently. The establishment licence holder introduced a range of measures following the incident to increase awareness of the requirements of ASPA and the roles of named persons at the establishment. The non-licensee was issued with a letter of censure while the establishment licence holder was issued with a letter of written reprimand for his failure to prevent the performance of unauthorised procedures at the establishment; the letters were recorded on their respective files.

7. The personal licence of a researcher was revoked at the request of the establishment. However, the researcher did not receive the notification directly. The incident was discovered by the Home Office when the researcher later applied to convert the paper licence to an e-licence on the Home Office IT system and it was found to have been revoked. In the intervening period the researcher had carried out numerous regulated procedures on protected animals without a personal licence. The incident occurred as a result of a misconception that licence authority was in place. The researcher had also been able to continue to access the animal units in the establishment and conduct regulated procedures without being flagged by the establishment systems as no longer having a personal licence. There was no intent to circumvent the regulations and the procedures appear to have been otherwise well performed. The researcher voluntarily completed retraining in modules 1–3, and the establishment made arrangements for the researcher to undertake an internal personal licence induction course and a competency assessment of Schedule 1 killing methods. On discovery of this incident an internal review was conducted by the establishment and measures were put in place to effect improvements and prevent recurrence. No formal action was taken under ASPA by the Home Office although the details of the case were recorded on the files of the personal licence holder, the project licence holder and the establishment licence holder.

8. A procedure was applied to 20 mice that was not authorised by the project licence protocol. The Home Office liaison contact (HOLC) identified the error and carried out a rapid, thorough internal investigation with the named veterinary surgeon (NVS), the named animal care and welfare officer (NACWO), and the personal and project licence holders. The technique was otherwise performed competently and the mice did not suffer adverse welfare costs as a result of the procedure applied. However, they were culled on discovery of the incident, so no scientific outputs were gained and the mice were effectively wasted. Had the project licence holder requested an amendment to authorise the combination of procedures then this would have been granted. The two personal licence holders involved were each sent a letter of written reprimand, which was also recorded on their files.

9. The holder of a personal licence carried out regulated procedures without the appropriate personal licence authority to do so. The holder had previously applied for an amendment to add surgical procedures to their personal licence but this was refused due to a lack of appropriate module training documentation. Although the licensee later provided the Home Office with the evidence of the required module training, they failed to reapply for their licence to be amended and had begun to perform regulated procedures for which there was no personal licence authority. The incident came to light when they requested that their paper licence be converted to an e-licence on the Animals Scientific Procedures e-Licensing system (ASPeL) to include authority for the additional techniques that were found not to be on the paper licence. The techniques appear to have otherwise been competently performed and supervision had been provided throughout. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file. In addition, because they had not maintained their surgical skills in recent years and the module 4 certificate that had been previously supplied had been issued in 2009, it was deemed out of date. The personal licence holder was required to retake the module and submit evidence of successful completion to the Home Office before authority to undertake the surgical techniques would be added to their personal licence.

10. Over a period of ten days, three mice were injected with a substance prior to Schedule 1 killing in order to image them as part of the technical development of an imaging system at the establishment. The project licence did not have technical development of the technique as an aim but did include use of the techniques for other scientific purposes. Deficiencies in the local controls at the establishment to prevent the performance of unauthorised regulated procedures were identified, together with a lack of communication among people with responsibilities under the Act. The establishment licence holder instituted a number of changes to improve local systems to prevent similar incidents from occurring. The establishment licence holder was sent a letter of written reprimand, which was also recorded on their file. The establishment licence holder was also required to submit to the Home Office within three months detailed information on how they would ensure that proper communication exists among those who are entrusted with the use and welfare of protected animals. The two personal licence holders involved were each sent a letter of written reprimand, which was also recorded on their files. The project licence holder was sent a letter of written reprimand, which was also recorded on their file.

11. The holder of a project licence, who also held a personal licence, induced myocardial infarction under general anaesthesia in 28 pigs. The surviving animals were allowed to recover consciousness and observed for seven days before being humanely killed. Additionally, a pilot experiment involving intravenous infusion only of the potential therapeutic agent was carried out in one pig under terminal general anaesthesia. Of the 28 animals used for the infarction study, 3 died during the initial procedures under anaesthesia. Of the remaining 25 animals, 6 were subsequently found dead believed as a result of developing ventricular fibrillation. The regulated procedures involved were specified in the project licence but were not applied as specified in the programme of work. The deficiency in project licence authority came to light in the course of correspondence between the inspector and the licence holder. This correspondence concerned the inspector's investigation into the circumstances surrounding the deaths of three animals out of a recently received batch of four pigs used in an experiment. The deficiency in project licence authority for the small pilot experiment came to light during a subsequent meeting with the licensee, which included scrutiny of their records. The techniques were otherwise performed competently. The project licence holder was keen to strengthen internal process by working in co-operation with the HOLC and the NVS on conduct of the experimental, care and post-mortem procedures and to prevent recurrence of any future non-compliance. The project/personal licence holder was sent a letter of written reprimand, which was also recorded on their file. The personal licence was varied by adding a condition to it requiring module 1 retraining; the project licence was varied by adding a condition to it requiring module 5 retraining. Both modules were to be completed within four months. The reason for requiring this was to improve the licence holder's knowledge of ASPA, and how they must meet their responsibilities as specified in the licences.

12. A personal licence holder injected a group of 12 mice with antigen plus adjuvant in order to generate hyperimmune serum. The protocol authorised three injections, but half of the group was given a fourth injection without the necessary project licence authority. Apart from the pain and distress associated with subcutaneous injection, no additional adverse effects were experienced by the mice and the procedures were otherwise competently performed. The personal licence holder failed to check that authority existed in the project licence to undertake the procedure. Had the project licence holder requested an amendment to undertake the additional adjuvant injection then, based on the scientific justification, it would have been granted. The establishment licence holder, project licence holder and personal licence holder were each sent a letter of written reprimand, which was also recorded on their files.

13. Substances were administered by subcutaneous injection into the footpad of three genetically altered mice. The regulated procedures involved were specified in the personal and project licences and were applied as part of the specified programme of work.

However, the procedures were applied to genetically altered mice when this type of animal was not specified in the project licence. The non-compliance came to light after the study had been completed when the HOLC routinely reviewed the Individual Study Plan (ISP). It occurred because the project licence holder failed to check the project licence thoroughly before mistakenly advising the personal licensee that it authorised the use of genetically altered mice. The personal licence holder who had carried out the procedures also failed to check fully the project licence prior to carrying the out the procedures. The procedures were competently performed with no refinement or reduction concerns. The format and usage of the ISPs at the establishment were reviewed. In addition, the HOLC's role was enhanced to provide an additional quality assurance check for the establishment licence holder that the systems in place to avoid such errors were being followed, with feedback for improvement being given to project licence holders where appropriate. The project licence holder and the personal licence holder were each sent a letter of written reprimand, which was also recorded on their files.

14. A group of ten pigs were bled in the course of a growth study in pigs at weaning. An unexpected procedural adverse effect led to the sudden death of one pig and the culling of the remaining nine, three days into the planned five-day study. In the course of preparing a standard condition 18 report it was found that one of the study team who had taken some of the blood samples had applied for, but did not yet have, a personal licence. Another personal licence holder had asked the non-licensee to assist with taking blood in the mistaken belief that a personal licence was held. The non-licensee was an experienced veterinary surgeon and had completed module 1 training. The procedures were competently performed and the adverse effect was not related to the blood sampling technique. Deficiencies in the local controls at the establishment to prevent the performance of unauthorised regulated procedures were identified, together with a lack of communication among people with responsibilities under ASPA. The establishment licence holder instituted a number of changes with key staff involved to improve local systems and to prevent similar incidents from occurring. The establishment licence holder was sent a letter of written reprimand, which was also recorded on their file, and required to submit to the Home Office within three months detailed information on how they would ensure that proper communication exists among those that are entrusted with the use and welfare of protected animals. The non-licensee was sent a letter of censure, which was also recorded on their file once their personal licence application was granted.

15. Two personal licensees routinely anaesthetised rats prior to oral dosing by gavage without the project licence authority to do so. The incident came to light when the Home Office assigned inspector queried the use of anaesthesia as a routine procedure for oral dosing of rats as part of the assessment of an application for a new project licence. The breach arose as a result of the project licence holder failing to check that the procedure was authorised by his project licence. It was discovered that the unauthorised procedures had been routinely performed since the grant of the project licence on a total of 389 rats. Letters of written reprimand were issued to the establishment licence holder, project licence holders and the two personal licensees, which were also recorded on their files. The establishment licence holder was also required to ensure that all licensees should be aware of their responsibilities, in particular to ensure that they take all reasonable steps to ensure that appropriate personal and project licence authorities exist before performing regulated procedures.

16. A mouse was found dead unexpectedly after exposure to a dose of radiation higher than that authorised in the project licence. Prior to the incident the project licence holder had submitted a request to the establishment's local Animal Welfare and Ethical Review Body (AWERB) to amend the licence to increase the dose of irradiation given, prior to the formal submission of the application to the Home Office. The amendment request was considered by the AWERB but when the project licence holder did not hear back from the AWERB, the licensee assumed that the

application for the amendment had been submitted to, and granted by, the Home Office. Errors and assumptions were also made by staff at the establishment, which culminated in the wrong version of the project licence protocol being circulated and worked from. It was not considered that there was any intent to circumvent the regulations, and there was a very detailed and robust local investigation when the incident was discovered. Changes in local practices were immediately instigated in order to prevent similar incidents from occurring. The project licence holder was sent a letter of written reprimand, which was recorded on their file, after which an application for amendment was submitted to the Home Office. The establishment had insisted the project licence holder retrain in module 5 and had they not done this, the Secretary of State would have required such retraining. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file.

17. Two groups of rats underwent brain lesions and following recovery one group of the rats was administered with a drug to promote regeneration by the oral route in a palatable jelly. The treatment and route of administration were not authorised by the project licence. There were no adverse effects as a result of the treatment given, and none were anticipated since the treatment was designed to repair the surgical lesion. The project licence holder had not commissioned the work undertaken by the personal licence holder, though the personal licence holder involved had mistakenly believed that the drug and route of administration was permitted in the project licence. The personal licence holder was issued with a letter of written reprimand, which was also recorded on their file.

18. The establishment discovered that an unknown number of neonatal mouse pups one or two days old had been killed by freezing, rather than by the use of one of the prescribed killing methods listed in Schedule 1 of ASPA. The use of freezing to kill neonatal pups had been a relatively long-standing practice by a number of animal technicians at the establishment who admitted to the killing, believing that it was a more humane method than the prescribed methods in Schedule 1. The NACWO was unaware of this method being used. In addition, neither the number of pups killed nor the dates of the killings using this method was known, because the details had not been individually recorded in the Schedule 1 records. Upon discovery of this practice the establishment licence holder instituted a number of actions designed to improve local processes including retraining for all those involved, or likely to be involved, in Schedule 1 killing. The establishment licence holder was issued with a letter of written reprimand, which was also recorded on their file, and was required to ensure that all those on the Schedule 1 killing register have the requisite competence to carry out appropriate killing procedures.

19. A group of ten rats were injected with a compound to induce diabetes by the intraperitoneal route and later the same day they were anaesthetised and a fraction of a slow release insulin pellet was implanted subcutaneously into each animal. One rat was found dead the next morning and another was found to be exhibiting signs consistent with abdominal pain that did not subside, and was humanely killed a short time later. The administration of insulin after just a few hours was not in accordance with the project licence authorities and may have contributed to the death of at least one of the two rats that developed adverse effects. As a result of the incident, the establishment licence holder took a number of mitigating actions including holding a meeting with all members of his group to reiterate their responsibilities under ASPA. Letters of written reprimand were issued to the project licence holder and the personal licence holder, which were also recorded on their files.

20. The holder of a personal and project licence performed a regulated procedure believing it to be authorised under authority of the project licence. However, the procedure, which involved the implantation of a prospective biomaterial into four rats under general anaesthetic, was not authorised. The study plan had been checked by the NVS and the NACWO prior to performing the procedures; no one noticed the error. It only came to light when the licensee contacted the inspector to request an extension of the permitted duration of the study on the protocol. The licence holder was sent a letter of written reprimand, which was also recorded on their personal and project licence files. The establishment licence holder introduced local systems to improve the checking of study plans and project licence authorities and also undertook to consider more carefully the content of all such plans, in order to prevent similar incidents from occurring in the future. The establishment licence holder was sent a letter of written reprimand, which was also recorded on their file.

21. Two personal licence holders undertook surgical repairs on two mice in order to close wounds left when surface mounted implants were lost, one before and one at the end of a behavioural testing session. The project licence required that if there were any issues associated with the strength of attachment of head implants the animals should be immediately euthanised. The animals appeared unaffected at the time the implants detached and recovered uneventfully from the anaesthesia and wound closure. However, one mouse was found dead in its cage the following morning; the cause of death was unknown. The other mouse appeared normal the following morning but following the recommendation of the NVS, was humanely killed. The incidents occurred because the two personal licence holders failed to check the project licence authority under which they were working and additionally disregarded advice from the NVS to check the adverse effects section of the project licence protocol. The personal licence holders were each sent a letter of written reprimand, which was also recorded on their files.

22. A number of mice bred for use on tumour studies were discovered exhibiting overt neurological signs manifested as seizures. The mice were retained on the study protocols without the project licence authority to maintain such adverse phenotype animals. The breeding strategy and tumour studies continued despite the adverse effects section of the protocol, which required that animals with neurological symptoms should be killed. There were also cases where animals were found dead, which exceeded the severity limit of the protocol. Details were not reported as they should have been to the project licence holder or the Home Office. The group were not familiar with the limiting adverse effects applicable to the protocol. The project licence holder immediately arranged a meeting and group training for all personal licence holders working under the authority of his project licence in order to discuss learning outcomes and to reinforce individual responsibilities. The project licence holder was issued with a letter of written reprimand, which was also recorded on his file. The personal licence holder was issued with a letter of written reprimand, which was also recorded on their file, and required to undergo retraining in modules 1 and 3.

23. During a routine compliance inspection visit by the assigned inspector, it was discovered that a medically qualified surgeon had undertaken a series of procedures to place endovascular stents in the hearts of rabbits without the personal licence authority to do so. Although the surgeon had undertaken the appropriate modular training required, he had failed to apply for a personal licence in the mistaken belief that the module certificate constituted his personal licence. The procedures were otherwise competently performed and the animals recovered uneventfully. The establishment instituted new controls and checks to prevent any recurrence of this type of procedure. Letters of written reprimand were sent to the establishment licence holder and to the project licence holder, which were also recorded on their files. The non-licence holder was sent a letter of censure and required to retrain in module 1 before applying for a personal licence.

24. Two mice that were due to be culled from the breeding and maintenance protocol of a project licence were subject to intraperitoneal saline injections without the necessary project licence authority to do so in order to train a personal licence holder on the injection method. The injections were administered under the direct instruction and supervision of the project licence holder and were otherwise competently performed. The use of animals in this way was permitted in other European countries where the project licence holder had previously worked and she genuinely, though mistakenly, believed that to be the case in the UK. The incident came to light when another personal licensee being trained in the same technique requested live animals from the NACWO. The project licence holder and the personal licence holder were each issued with a letter of written reprimand, which were also recorded on their files, and both were required to undergo retraining in module 1.

25. Over a 9-month period, a person performed regulated procedures involving tail fin biopsies and imaging on 20 zebra fish without holding a personal licence. The incident was discovered when the non-licensee was asked for his personal licence number in order to complete a tank label. The individual concerned had believed that the modular training certificate was the personal licence. Local systems in place were unable to detect or prevent this. The procedures had otherwise been competently performed. The establishment modified its records system to ensure that electronic 'flags' would be raised with project licence holders if a person proposing to work under the authority of a project licence was not licensed or not competent to work under their personal licence. The non-licence holder was sent a letter of censure, which was recorded on their file once they had applied for their personal licence. The establishment licence holder was issued with a letter of written reprimand, which was recorded on their file.

2. Examples of failure to provide food and/or water

1. An animal care technician discovered three cages without food, and five dead mice. The dead animals consisted of three dead adult mice in a clean cage, one dead adult mouse in a cage of three adult mice, and one dead mouse likely to have died in an overcrowded cage of weaners. The absence of food and, in one other cage, the likely absence of water, is considered to have been significant aggravating factors in the death of all of the five mice. The establishment said the incident occurred as a consequence of staff oversight resulting from pressures of work caused by acute staff shortages, coupled with changes in the systems for managing the cages. The establishment licence holder took quick and robust action to mitigate against a recurrence of the incident, including the recruitment of additional care staff. The establishment licence holder was issued with a letter of written reprimand, which was recorded on their file.

2. An animal technician failed to check adequately two cages containing 50 stock mice and as a result the mice did not have enough food over the weekend, which led to the death of several of the mice and severe suffering of those that survived. A second animal technician also failed to check the animals properly on the Monday morning, which further delayed discovery of the dead and dying animals. When found, those mice remaining alive were immediately humanely killed. The establishment subsequently dismissed the first animal technician and disciplined the second technician. The establishment licence holder introduced revised detailed standard operating procedures for the future checking of animals, which included an additional back-up check. All staff were given comprehensive and thorough retraining to ensure that they knew about the new processes and were competent to carry them out. The establishment licence holder was issued with a letter of written reprimand, which was recorded on their file.

3. Two mice had to be humanely killed when they were found to be in a condition of severe weakness and dehydration after they had been erroneously left without water by the NACWO for approximately 48 hours. The water bottle had been removed from the cage in order to remove a mouse. When the cage lid was replaced, there was a failure to return the water bottle back into the cage that still contained two mice and the cage card was not placed back into the cage holder in the correct way .The NACWO had been under work pressures due to personal circumstances and was sent for further local retraining in the checking of animals held in isolators. In addition, revised room record sheets were introduced in the animal holding areas and procedure rooms requiring additional husbandry checks. The establishment licence holder was issued with a letter of written reprimand, which was also recorded on their file.

4. One cage of four mice underwent a 16-hour fast followed by an intraperitoneal glucose tolerance test, as authorised by the project licence. When the procedure finished the personal licence holder with responsibility for feeding the mice failed to provide food and the mice were left without food overnight. When inspected the following day the mice had therefore been without food for two nights and as a result they had suffered a weight loss of around 20 to 25 per cent. Although the mice appeared in good health, they were killed upon discovery to stop any further suffering. The establishment licence holder held a detailed local investigation together with meetings with key staff involved in order to optimise local practices and to prevent similar incidents from recurring. Communications were issued to all licence holders and technical staff to remind them to return feed to animals after a procedure that includes fasting, and to ensure food and water is available in every cage at the end of day check. The establishment licence holder and the personal licence holder were each sent a letter of written reprimand, which was also recorded on their files.

5. A group of three animals were left without water over a weekend. One animal was found dead and two others were discovered to be very unwell. One of the surviving two animals was culled immediately and an attempt was made to rehydrate and monitor the second surviving animal over a period of 24 to 36 hours but recovery was poor and it was eventually culled. The person responsible for overseeing the welfare of the animals and performing daily checks over the weekend failed to carry out these checks in accordance with the establishment's standard operating procedures. Further investigation revealed that the electronic timing recording system showed that the person was not in the animal unit long enough to have carried out a detailed check of the animals. The establishment licence holder undertook a very detailed local investigation. This included a review of standard operating procedures to ensure that they fully described what a daily check requires, and what duties need to be performed at the weekends. The standard operating procedures were made readily available to staff, as well as used for training and CPD. Disciplinary action was taken against the person, which included retraining and redeployment to another part of the establishment with full supervision until they were considered competent. As the person was a personal licence holder a letter of written reprimand was sent, which was also recorded on their file.

6. A rat on a long-term study was due to be killed on welfare grounds based on its clinical signs and was placed in a box for transport to the necropsy area for humane killing. Between being dispatched from the animal unit and received into necropsy the animal was inadvertently left for over 24 hours in its transport box. Although it had access to water it did not have access to food during this time. The delay in culling meant that there was suffering that could have been avoided had the euthanasia taken place when originally planned. The investigation highlighted a breakdown in communication between transport staff and the receiving unit as a contributory factor to this incident. This resulted in a thorough local investigation leading to a review of the

local systems in order to prevent any future recurrence. The establishment licence holder was issued with a letter of reprimand, which was also recorded on their file.

7. A cage containing a breeding pair of mice was prepared by the responsible personal licence holder. They provided bedding, water and appropriate environmental enrichment, but failed to provide any food for the mice. The absence of food in the hopper of the cage for the two animals and their declining state of health was not detected for five consecutive days despite daily checks by the technician in charge of the room and two further checks by the responsible personal licensee. Both mice were found dead in the cage five days later by the responsible technician. The NACWO and unit manager immediately reviewed standard operating procedures. They added a checklist to be completed every time a new cage was to be prepared by licensees, which would be signed-off daily by the managers. They also placed new signage in the holding rooms reminding staff of the checks that should be done whilst preparing cages. The NACWO undertook a thorough investigation, including seeking advice across the establishment estate from other NACWOs on other ways of preventing a similar incident, and also organised additional training and assessment for the technician. The establishment licence holder, who instituted a very detailed local investigation when the incident was discovered and changed local practices in order to prevent similar incidents from occurring, though not in post at the time of the incident, was sent a letter of written reprimand, which was also recorded on their file. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file.

8. During routine cage checking procedures a member of staff discovered that three boxes of mice in an isolator were without food. Three of the animals had to be immediately culled due to their condition, which was caused by a failure by staff to provide sufficient food to meet their needs. The incident occurred because staff failed to notice that food stocks were depleted, despite twice daily cage checks that were said to have been carried out and signed-off as such by four different animal care staff. It was not possible to establish when the food that had been previously given ran out, but it is likely that it was within one to two days of the discovery (over a weekend). Because of the failure to ensure that establishment licence (PEL) standard condition 4(3) was met, a letter of censure was sent to the former establishment licence holder who was in post at the time the incident occurred, while a letter of written reprimand was issued to the replacement establishment licence holder and also recorded on their file. The establishment agreed to implement comprehensive individual reassessments of the training and competency of all staff involved with checking and caring for animals, which have been completed. No further incidents have been reported.

9. A personal licence holder failed to provide food to a cohort of 10 mice in 1 of 7 cages that he was responsible for while they were on a restricted food study. The study required food to be restricted to around 85 per cent of normal daily intake. The ten mice in the cage without food cannibalised each other. Upon discovery, only five of the original ten mice in the single cage were still alive and one was promptly killed by a Schedule 1 method on welfare grounds. The remaining four mice were immediately fed but by the early afternoon were considered to be suffering and were humanely killed on welfare grounds.

It was established that the animals were not fed for at least two days and possibly four days even though the personal licensee who was responsible for the animals signed the daily record book to record that the animals were fed. In addition, of the other six small cages of mice at least one cage showed signs of the animals not having been fed for at least some of the time period as they appeared to have lost weight and appeared to be not as well as those in the remaining cages.

The incident appears to have occurred due to the personal licensee's lack of organisation and attention to detail. The establishment holder acted swiftly to ensure that the personal

licensee was not involved in any further training of others in the group and was suspended by the establishment licence holder from performing any regulated procedures whilst the incident was being investigated. The establishment licence holder reviewed his monitoring systems to ensure that they would be sufficiently robust to prevent a similar occurrence in future. The establishment licence holder was sent a letter of written reprimand, which was also recorded on his file. He was also required to undertake a detailed review, within three months from the date of receipt the letter, of the record keeping procedures in all rooms with a view to identifying and implementing improved recording methods. In addition, he was required to instigate immediately a formalised and documented record of training for all personal licence holders having direct animal care responsibilities, with particular regard to those with sole responsibility for feeding animals under food and/or water restriction. The reason for this was to assure the Secretary of State that the local systems in place would be able to detect and prevent similar incidents from occurring. The personal licence holder was issued with a letter of written reprimand, which was also recorded on their file, and required to retrain in modules 1, 2 and 3.

10. Two stock mice were found dead in their cage due to a failure to provide food and water over a three-day period including a weekend. A member of staff had placed the stock mice into a prepared cage after weaning, but they failed to give them food and water. Subsequent checks undertaken by a personal licence holder failed to detect that mice were in the cage, and therefore the lack of food and water in the cage went unnoticed over the weekend. A letter of written reprimand was sent to the personal licence holder, which was also recorded on their file. The non-licensee was issued with a letter of censure. Following a previous incident, the establishment licence holder was subject to a Compliance Notice, requiring a review of routine husbandry procedures and staff training and competency. The establishment implemented a comprehensive review of procedures, and carried out individual retraining and a reassessment of the training and competency of all staff involved with checking and caring for animals.

11. During routine daily checks, an animal technician discovered a cage containing four sick and moribund mice. One animal died within minutes of discovery and the remaining three had to be immediately culled due to their deteriorating condition. There was no food in the cage and the animals may have been left without food since a routine cage change five days previously. Additionally, four different technicians had checked the mice daily over those five days and none had noticed the lack of food or the deteriorating condition of the mice. The establishment licence holder, the Director of Biomedical Services and the team leader in the room carried out a thorough internal investigation and determined that the incident occurred due to human error. The standard operating procedures were rewritten and training was provided to all animal technicians. Leadership sought input from the technicians on how best to avoid this situation recurring, and it was agreed that a second check would be carried out every weekday afternoon by an experienced technician who would check that every cage had food and water. The establishment licence holder who is responsible for the performance of named persons was issued with a letter of reprimand, which was also recorded on their file.

12. A group of three mice were briefly anaesthetised on a Friday to perform a non-surgical procedure and were returned to stock cages later that day. On Monday it was found that the animals had not been provided with a food hopper and that no food had been provided over the weekend. The mice were seen to be slow moving, pinched in at the abdomen and hunched. Food was immediately provided and the mice recovered within two hours. The mice were culled on Wednesday following consultation between the NVS and project licence holder around concerns on the reliability of the data that had been gathered from these animals. Further investigation revealed that daily checks were not being carried out consistently at weekends

and that staff had not been trained in what was expected from them in daily checking. The establishment licence holder introduced measures to ensure that all staff involved in the daily checking of animals were trained and introduced additional checks of all rooms on Fridays. A number of further controls, including additional resources for weekend checks, were put in place to prevent recurrence. The establishment licence holder was issued with a letter of written reprimand, which was recorded on their file.

3. Examples of unauthorised re-use of animals

1. During a routine inspection at an establishment, the Home Office inspector discovered that two sheep had been used by a personal licence holder in two unrelated procedures. Further investigation revealed that this constituted re-use and such re-use was authorised for only one of the sheep. The investigation also revealed that an animal technician had sought the advice of the NVS regarding whether the re-use of the sheep was authorised and was given inaccurate information. From welfare and scientific points of view the re-use of the sheep was justified and the procedure was competently performed. Had authority for re-use been requested it would have been authorised. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file. The project licence holder, whose licence had been revoked due to retirement, was sent a letter of censure.

2. A macaque was re-used by having a blood sample taken a week earlier than permitted under the controls of the project licence, which specified that animals would be rested not less than two weeks between re-uses. The re-use occurred due to an error in record keeping. There were no discernible additional adverse effects from taking the blood sample. New systems of recording were put in place to prevent similar incidents from occurring. The project licence holder was issued with a letter of written reprimand, which was recorded on their file.

3. Due to failure of an establishment's systems for preventing unauthorised re-use in animals returned to stock after use, a group 28 calves, which had been bled for DNA analysis, were castrated as part of a study on a project licence that did not have authority to permit the re-use of animals. The procedure was otherwise competently performed and had the project licence holder requested an amendment to the project licence to allow the re-use of animals then this would have been granted. The project licence holder was sent a letter of written reprimand, which was also recorded on their file. The establishment licence holder introduced more rigorous procedures to prevent the recurrence of such incidents and was sent a letter of written reprimand, which was also recorded on their file.

4. A group of 19 mice underwent a second series of conditioning procedures as part of a programme of neuro-behavioural phenotypic testing after the wrong cohort of animals was selected. The procedure was otherwise performed competently with no unexpected adverse effects experienced by the mice. However, the project licence only authorised a single series of conditioning. The mice were euthanised at the time of discovery to terminate the study. The personal licensee had printed off the wrong animal procedure list and failed to double check the cage card systems. The incident was only discovered when another licensee realised that the animals had undergone a second regime of conditioning. The establishment licence holder required the personal licensee to have all procedures monitored until the NTCO was able to provide reassurance that competence was fully achieved. The personal licence holder was sent a letter of written reprimand, which was recorded on their file.

Section 2: Other cases of non-compliance, not included in the three common themes

1. Three of eight mice unexpectedly became ill after surgery and one was found dead by a Home Office inspector. Records indicated that the mice had been checked twice in the previous three hours but had not been noted to be ill, when it was likely that they were. The checks were considered to have been ineffective. Previous advice from the named persons regarding anaesthesia and post-surgical monitoring had not been taken by the personal licensees involved. The project licence holder and personal licence holder were issued with letters of written reprimand, which were also recorded on their files, and the personal licence holder was also required to retrain in module 1. Following the incident enhanced systems of daily monitoring by the care staff of post-surgical mice for up to 72 hours coupled with improvements in record keeping were introduced. It was felt that these measures would significantly reduce the risk of any recurrence. Subsequent inspections showed that significant improvements had indeed been made.

2. At the end of a study, a personal licence holder incompletely performed a Schedule 1 method of humane killing on approximately 40 rats. The method should have been killing by means of cervical dislocation with confirmation of death by permanent cessation of the circulation, to be achieved in this case by severing the femoral arteries. However, two rats were found alive inside a clinical waste bin three hours later as the licensee had failed to carry out the mandatory step of confirming death by severing the femoral arteries. Upon discovery, the two rats were immediately killed and death was confirmed by exsanguination. The establishment licence holder took disciplinary action against the licensee and requested the revocation of their licence. They were also informed that should they ever apply for a personal licence to carry out regulated procedures under the Act at some future date, they would be required to undertake retraining in modules 1, 2, 3, and Schedule 1 killing to improve their knowledge of ASPA. The personal licensee was issued with a letter of written reprimand, which was also recorded on their file.

3. A project licence holder self-reported that he had significantly exceeded the estimated number of mice that were authorised in his licence. The error was discovered when the 2014 annual returns for the number of animals used was being calculated. A maximum of 3,250 mice were authorised for use but by the end of 2014 a total of 6,903 mice had been used before the error was detected. Other than the use of additional animals, there were no other welfare costs arising and the additional work was scientifically justified. A letter of written reprimand was issued to the project licence holder, which was also recorded on his file.

4. A personal licence holder anaesthetised 105 zebrafish with tricaine to extract sperm. When many of the fish failed to recover from the anaesthetic as expected, the personal licensee left the fish in tanks in the procedure room in the hope that some would recover and these novel breeding lines could be subsequently re-used. The NACWO found the fish, removed 55 dead fish and culled a further 8 that showed persisting abnormal behaviour. The tanks holding these fish had not been labelled. This was a failure to provide the fish with adequate care, to label enclosures appropriately and to minimise the duration of suffering. During the course of the investigation, deficiencies were identified in PEL record keeping. As the issues uncovered were rapidly addressed by the establishment and the personal licensee understood their failing, the establishment licence holder and the personal licence holder were each issued with a letter of written reprimand, which was also recorded on their files.

5. Four mice had undergone regulated procedures and were transported from a central building to an outlying building for culling and processing after reaching their humane endpoints. However, they were delivered to the wrong room and not found until approximately 10 a.m. the following day. Two mice were in their home cage with food and water and the other two were in transport boxes without food and water. All four mice

suffered due to not being culled promptly. The two mice that had been left without food and water were in a poor condition and were immediately culled. The establishment licence holder was sent a letter of written reprimand, which was recorded on their file. The establishment had voluntarily introduced new and more robust systems for transporting animals to outlying rooms, and a number of other measures to minimise any recurrence of this type of incident. Had they not taken these actions they would have been served with a Compliance Notice. The personal licence holder who had responsibility for the mice was sent a letter of written reprimand, which was also recorded on their file, and required to undertake module 1 retraining within six months.

6. Twenty-six mice were being exported under project licence authority. The NACWO responsible for the export, who was a personal licence holder, placed small containers in the isolator the previous day. The technician undertaking the export, also a personal licence holder, transferred the mice from the isolator in the 15 unsuitably small containers left by the NACWO. The procedure of packing the containers and moving them out of the isolators meant that when they were opened 30 minutes later to move the animals into transport boxes, 7 of the mice were already dead and the other 19 mice were in a state of distress due to anoxia and so were immediately killed. The establishment licence holder immediately suspended both personal licensees. They subsequently received written warnings about their conduct; one was reassigned to a non-NACWO role at the establishment and the other resigned from post. The establishment licence holder changed the technical structure for the unit to help ensure that the overall culture of care was better embedded within the establishment, and also increased the pool of knowledgeable individuals who work in isolators. Additionally, the establishment licence holder reviewed the standard operating procedures, removed the NACWO from post, and required retraining for them. The establishment licence holder was sent a letter of written reprimand, which was recorded on their file. The NACWO was sent a letter of written reprimand and informed that had the proactive actions not been taken by the establishment licence holder, the Secretary of State would have imposed an additional condition on the personal licence requiring such retraining. The personal licence holder who resigned from post was sent a letter of censure and informed that had her licence not been returned to the Home Office for revocation, the Secretary of State would have required her to undergo modular retraining. She was also advised that should she apply for a personal licence at some future date, the Secretary of State would take the circumstances of the incident into account in arriving at a decision to grant or refuse any such application. Additionally, prior to the submission of any such application, she would be required to undertake all the modular training that was necessary for a holder of a personal licence, to ensure that she had a thorough understanding of ASPA.

7. During an evaluation of a project licence, it was discovered that two marmosets had been re-homed without the necessary consent. The establishment then identified that one guinea pig and four rats had also been re-homed without the necessary consent. The animals concerned had all been intended for use in regulated procedures but became unexpectedly surplus to requirements. It was not considered to be the result of careless breeding or over-stocking. None of the staff and named persons involved was aware that written consent from the Secretary of State is required for the re-homing of such 'relevant protected animals' that had not undergone regulated procedures. The establishment licence holder was sent a letter of written reprimand, which was also recorded on their file. ASRU has since issued an Advice Note to all establishment licence holders clarifying the procedures to be followed when re-homing relevant protected animals.

8. In the process of harvesting tissues from a mouse that was supposed to have been killed by Schedule 1 killing, it was discovered that the animal had not been euthanised and it was observed to be breathing while the procedure was taking place. It was believed that the animal had been administered terminal anaesthesia by a personal licensee, but death

had not been properly completed by a required method. The incident was discovered by the NVS who came into the procedure room as part of their inspection activities. The NVS quickly intervened to sever the abdominal aorta, at which point the animal was rapidly exsanguinated and death was confirmed. The establishment licence holder had failed to ensure that those carrying out the Schedule 1 killing had the necessary competence before undertaking such killing, and also that they were properly supervised. A letter of written reprimand was sent to the establishment licence holder, which was also recorded on their file.

9. Following two reports under project licence standard condition 18 it was discovered that a group of mice that had undergone regulated procedures had remained alive without due determination from a veterinary surgeon that they were not suffering, and were not likely to suffer adverse effects as a result of the regulated procedures. This was considered a breach of standard condition 11 of the project licence. The animals had not suffered as a result of being kept alive. The establishment introduced a number of local measures to help prevent recurrence including tightening up the animal transfer procedures. The project licence holder was sent a letter of written reprimand, which was also recorded on their file.

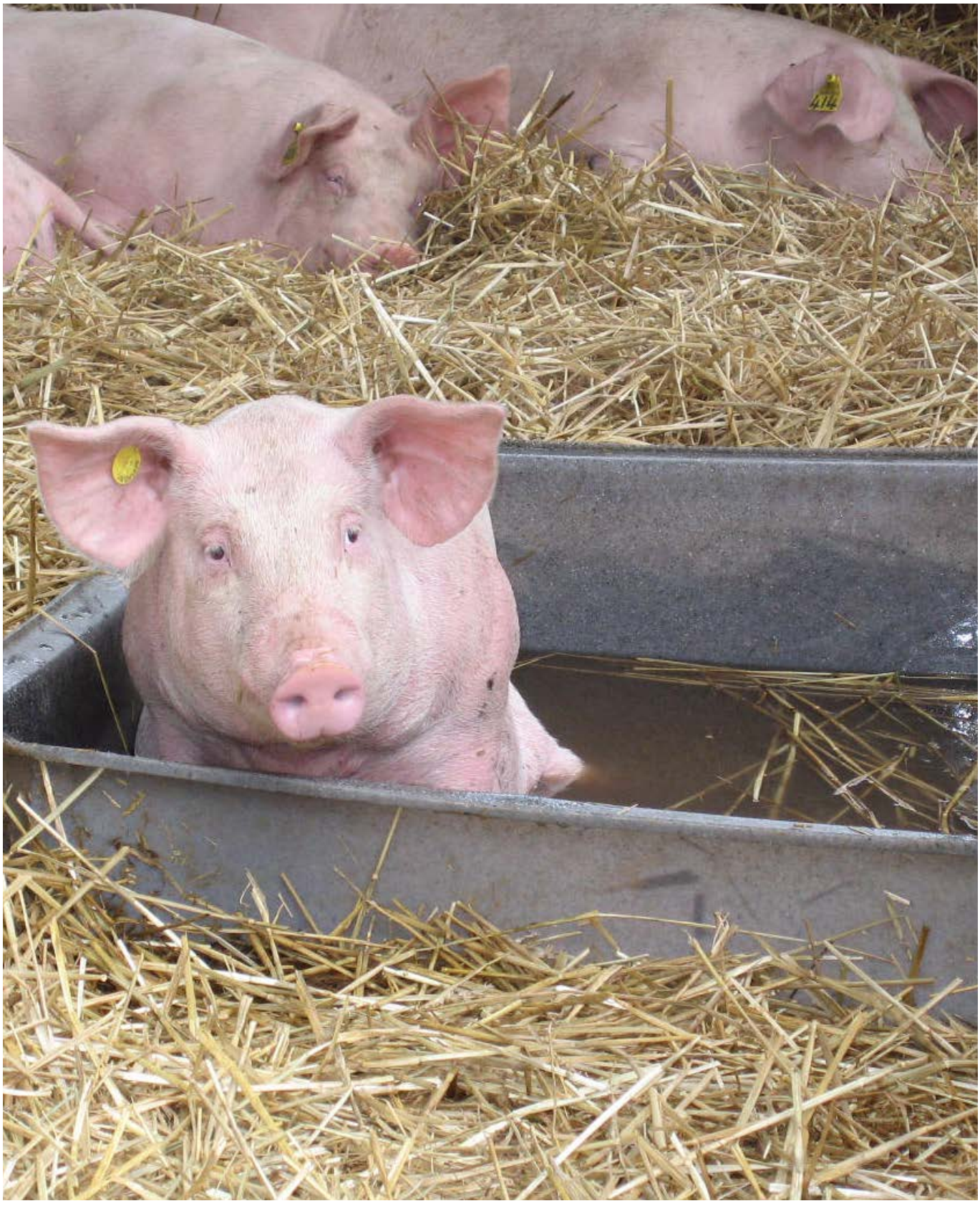
10. single stock guinea pig that was not on a procedure was found to be showing signs of ill health and was not immediately euthanised but instead was left to suffer deterioration of health into a second day. The guinea pig had been found by the unit manger to be showing symptoms of hypovitaminosis C and accordingly arrangements were made for it to be killed later that day by the NACWO. It was subsequently discovered that this was not done and as a consequence the animal suffered further deterioration in health before being found and eventually killed the following morning by the unit manager. The establishment holder immediately suspended the NACWO pending the outcome of a disciplinary investigation. The NACWO resigned their post prior to the completion of that investigation. The establishment licence holder was issued with a letter of written reprimand, which was also recorded on their file.

11. During an unannounced inspection an inspector witnessed mice being blood sampled by a personal licensee. Two mice were placed in an inhalation anaesthesia knockdown box, and once anaesthetised the licensee removed a mouse, undertook a routine ear biopsy followed by removal of the tail tip by scalpel. The mouse reacted immediately, scrabbling, with audible squeaks and undoubtedly suffered pain and distress. The procedure was stopped by the inspector as it was not being competently undertaken. The licensee failed to transfer the mice to a nose cone in order to maintain anaesthesia and also failed to check their levels of consciousness prior to removing the tail tips. Moreover, the blood samples were collected onto the same scalpel blade that had been used to remove the tail tips, prior to pipette into vials without disinfection occurring between mice risking cross-contamination of the samples. The personal licence holder breached Section 3b of ASPA in that they undertook a regulated procedure without project licence authority, failed to undertake samples in accordance with the principles of refinement, failed to maintain general anaesthesia of a sufficient depth to prevent two mice from being aware of pain during the unauthorised regulated procedure, and failed to take reasonable steps to ensure that appropriate project licence authorities existed before performing the regulated procedures.

Authorities on the project licence were checked and blood sampling was authorised by venepuncture only under recovery anaesthesia. The project licence holder failed to ensure that the work was carried out in compliance with the project licence authority. The establishment licence holder failed to take reasonable steps to prevent the performance of unauthorised procedures in the establishment. The establishment licence holder undertook a very detailed local investigation. Several meetings were held with named persons, the project licence holder and project team in order to optimise local practices and training and

competency assessment, to prevent similar incidents from occurring. The establishment's training system database was updated so that all personal licence holders would be fully aware of what procedures they were considered competent to perform.

The personal licence holder voluntarily requested revocation of their personal licence, which was done. The personal licence holder was also informed that were they to apply for a personal licence at some future date, the Secretary of State would take the circumstances of the



incident into account in arriving at a decision to grant or refuse any such application. Additionally, prior to the submission of any such future application, they would be required to undertake and successfully pass all the appropriate modular training necessary for a holder of a personal licence to ensure that they had a thorough understanding of ASPA. Consequently they were sent a letter of censure, which was recorded on their file. The project licence holder held meetings with the project team and the NVS to ensure that future procedures would be carried out in line with the project licence authority and would be conducted in the most refined manner. The project licence holder also voluntarily undertook module 5 retraining. They were sent a letter of written reprimand, which was recorded on their file. In view of the proactive action taken by the establishment licence holder they were sent a letter of written reprimand, which was also recorded on their file.

12. Thirty guinea pigs were used in control studies of a potential therapeutic drug. Twenty-four animals went on to develop unauthorised adverse effects that ranged from mild dyspnoea and temporary incapacitation to acute respiratory failure and death. The severity limits authorised by the project licence had been exceeded and the breach had not been reported to the Home Office. The incidents were discovered when the project licence holder sought advice from the assigned inspector regarding a possible project licence amendment. The project licence holder had failed to thoroughly read the project licence. The procedures conducted were otherwise competently performed, and the failure to report in a timely fashion was due to a genuine misunderstanding of the adverse effects section of the protocol. Had an amendment been requested in order to conduct the work it would have been granted. The project licence holder was sent a letter of written reprimand, which was also recorded on their file.

13. A personal licence holder believed that they had killed three mice by exsanguination under terminal general anaesthesia, completing death by cervical dislocation. The animals were taken to another laboratory for the collection of tissue and it was discovered that only one mouse was dead; one mouse still had a beating heart and the third mouse recovered consciousness and was seen to move. The two mice that were still alive were immediately killed by cervical dislocation. The mouse that moved had undergone a laparotomy and consequently it had been exposed to significant suffering. The degree of suffering experienced by the animal with the still-beating heart was difficult to quantify. Inspection of the licensee's Schedule 1 killing training and competence records showed that the licence holder had not undergone any refresher training in these particular methods of killing for more than ten years. It was clear that the licensee misunderstood the requirements of Schedule 1 for humane killing. The personal licence holder was sent a letter of written reprimand, which was also recorded on their file. Additionally, they were required to undergo retraining in Schedule 1 killing methods with supervision until they were assessed as fully competent.

14. Four male breeder mice were discovered dead in a water-logged cage as a result of water that had dripped from the ceiling and lighting, leading to their deaths by drowning. The leak was the result of a malfunctioning humidifier unit located within the loft space and was immediately reported to maintenance staff and rectified by an engineer. The animal technician checked the cage rack after discovering the leak, though they omitted to check the affected cage and this oversight was repeated on two further days, as the dead mice were not found until four days after the leak occurred. By the time the leak had been discovered the mice may well have been dead and therefore even if the animal technician had checked all the animals on a daily basis it is still unlikely that these deaths would have been prevented. However, the incident indicated that the animal technician had not carried out their duties as required, and under different circumstances more diligent checking could have prevented suffering. A number of changes to working practices were introduced to minimise the risk of recurrence of this type of incident. The establishment licence holder was issued with a letter of written reprimand, which was recorded on their file.

Appendix 2: Tables and figures

Table A1: Licence applications and amendments 2014–2015

	Total			Per inspector FTE		
	2015	2014	Change (%)	2015	2014	Change (%)
PILs granted	3,264	2,949	11	190.9	173.5	10
PILs amended	630	814	-23	36.8	47.9	-23
PILs in force at year-end						
PELs granted	5	6	-17		-	-
PELs amended	205	243	-16	12.0	14.3	-16
PELs in force at year-end	173	173*	0	10.1	10.5	-3
PPLs granted	559	474	18	32.7	27.9	17
PPLs amended	820	964	-15	48.0	56.7	-15
PPLs in force at year-end	2,656	2,610	2	155.0	158.4	-2
Inspectors FTE	17.1	17.0	1			

Note: FTE = full-time equivalent; PIL = personal licence; PEL = establishment licence; PPL = project licence

* (incorrectly recorded as 178 in 2014 ASRU Annual Report)

Figure A1: Inspectorate staff 2008-2015

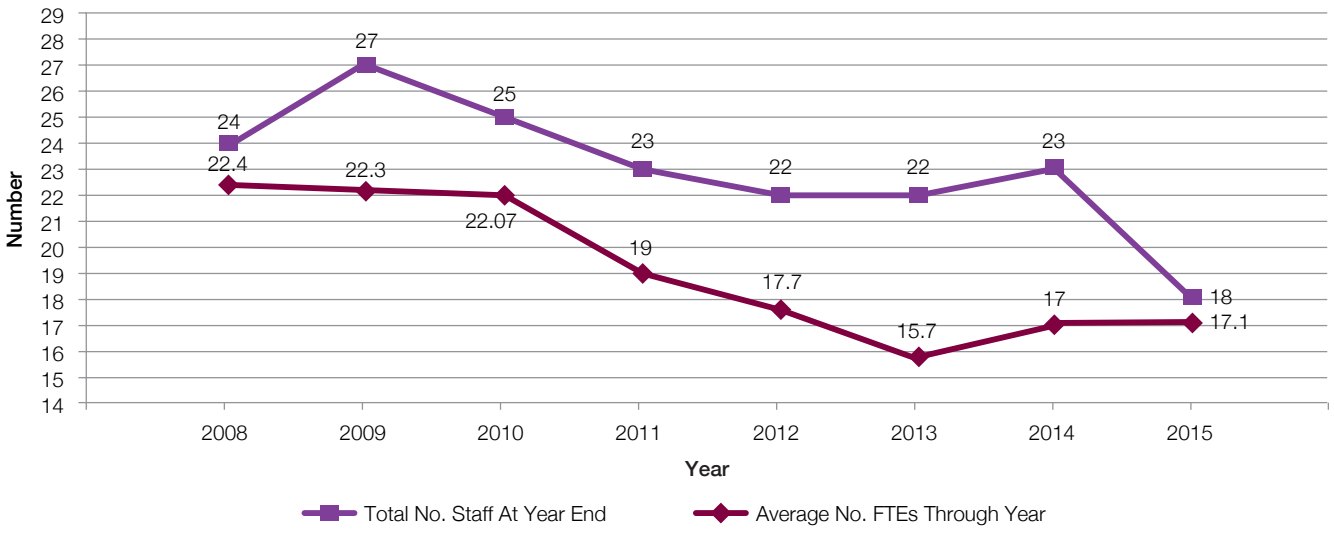


Figure A2: Project licences granted 2008-2015

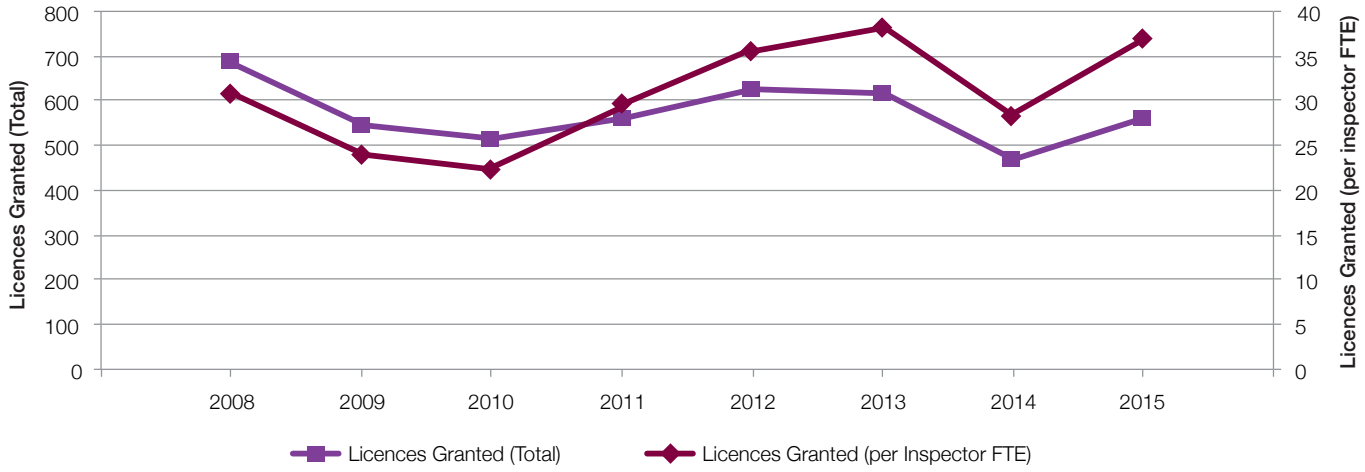


Figure A3: Project licence application processing 2008-2015

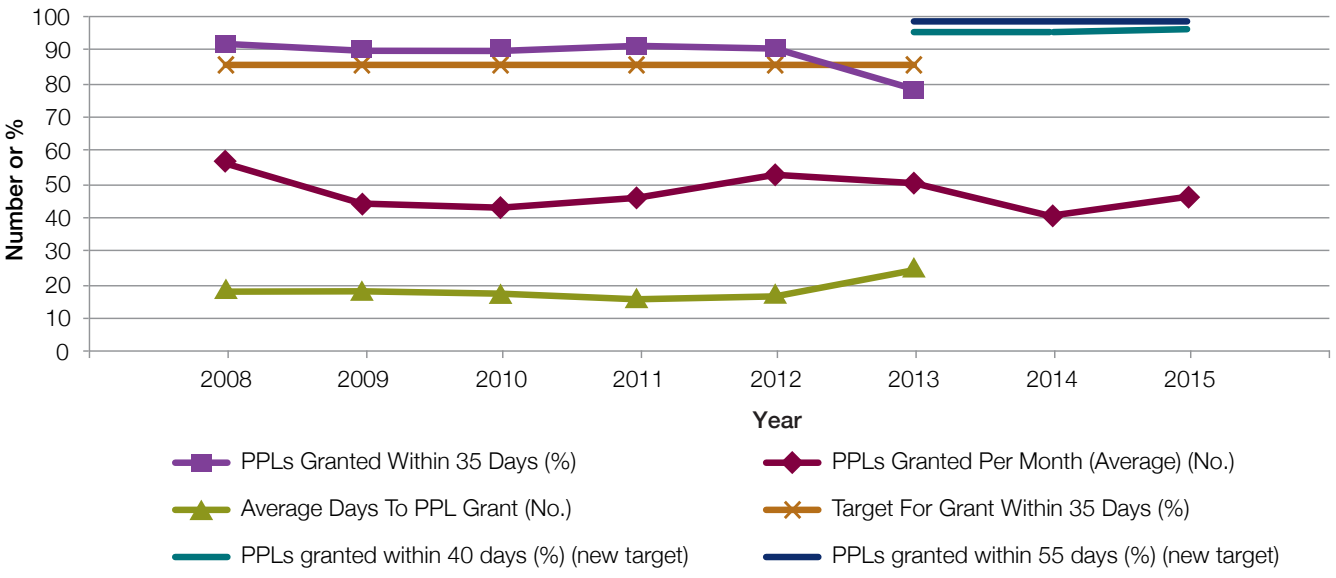


Figure A4: Inspections 2008-2015 (Total)

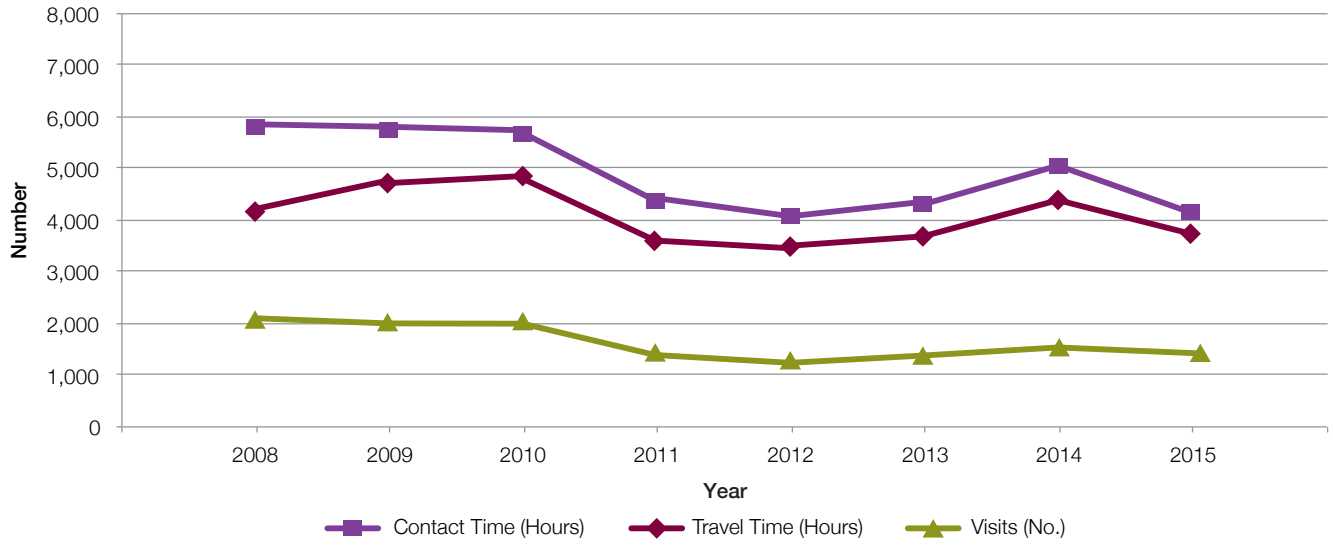
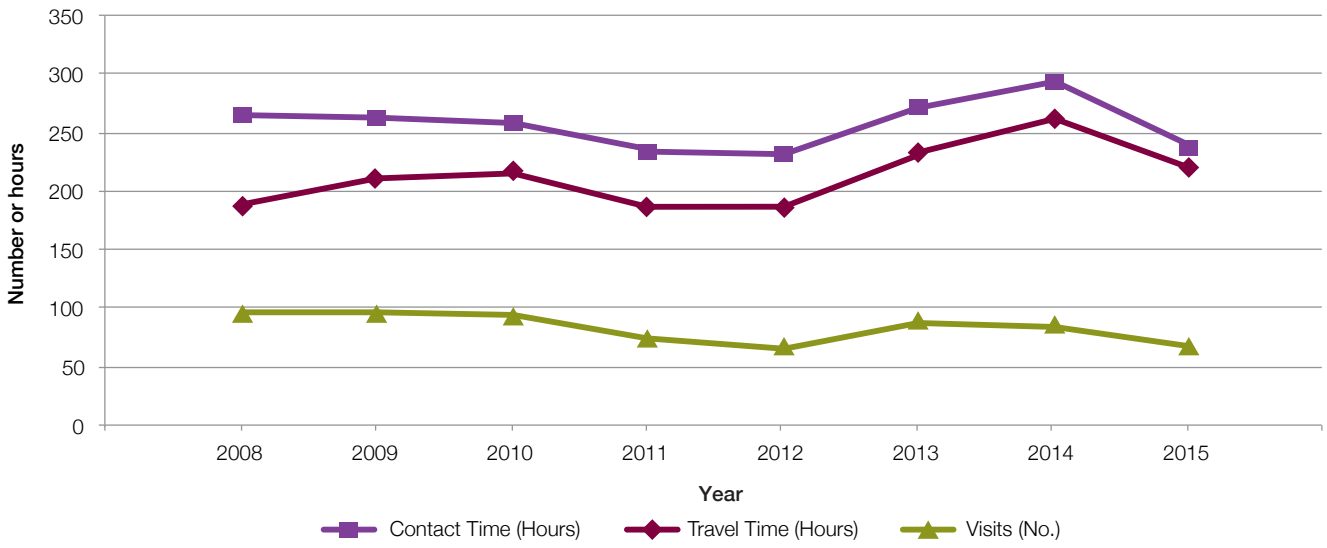


Figure A5: Inspections 2008-2015 (per FTE)



FTE = full-time equivalent

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