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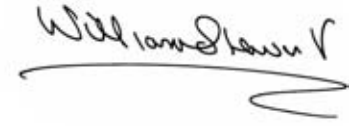
CHAIRMAN'S STATEMENT

It's my pleasure to introduce this, the third Annual Report of the Health Protection Agency. Compiled by the Chief Executive and her Executive team, the Report offers a snapshot of the vast array of work carried out by the Agency over the past 12 months. I congratulate staff at all levels on their hard work and endeavour and thank the Departments of Health and the Devolved Adminstrations for the continued support that they have given the Agency in this, its first year as a Non-Departmental Public Body. The sheer breadth of the work that we have to tackle is evident from the few examples presented in this report, but it is important to recognise also the uniqueness of the capability which the Agency can provide in its thrust to ensure ever improving public health protection. Let me touch on two examples.

First, the work of the Radiation Protection Division. It provides an unmatched source of advice, research and analyses on a vast range of public health radiation protection issues such as radon, power lines, mobile phones, developments in international radiation exposure standards, on the use of radiation devices in hospitals and this year it has set in place a new independent examination of the use of ultrasound in medical practice. Most importantly, however, the Division, as the former National Radiological Protection Board, historically, has played key roles in two previous public health inquiries related to the building of nuclear power stations in the UK. The first was the inquiry in to the Sizewell B power station, which was built, and the other the inquiry in to Hinkley C power station, which was not built. In the event of any proposal to develop new power plants in the UK the Agency would expect to provide substantial evidence and advice directly to any inquiry and to government organisations, and has to tool itself up with this possibility in mind.

Second, on the life sciences side, there is the uniqueness of the Agency's surveillance of infectious disease capability. This is increasingly required as people movement into and out of the UK and across national boundaries intensifies. The threat of pandemic 'flu remains a concern, the incidence of sexually transmissible diseases continues to rise, and antibiotic resistant bacteria and antiviral resistant viruses continue to be with us, whilst vaccines are not available or inappropriate for use in some key cases. Such information requires the national analyses which the Agency can provide.

The Agency is now three years old, much has been delivered as this report shows and we are proud of that, but much more remains to be done with necessarily limited resources. Operationally, managerially and entrepreneurially, new systems will have to come in to play to help further deliver our commitment to ever improving health-care provision for the people of the United Kingdom.



SIR WILLIAM STEWART FRS

CHIEF EXECUTIVE'S OVERVIEW

This Annual Report marks the end of a crucial and exciting year for the Agency. In April 2005, the Health Protection Agency Act came into force, establishing us as a UK-wide body and formalising our merger with the National Radiological Protection Board. The new Act has enabled us to take a step closer to realising our vision of an integrated health protection service and requires us to take a broader role in protecting the community against infections and other health hazards, both through our direct service provision and through our support of others in the field.

In October 2005, we published our first report on the Burden of Disease, which outlined the significant burden that infections place on primary care services and illustrated the disproportionate impact of disease on the young and the elderly. It also reinforced the recognition that health protection problems are unevenly distributed in the population, adding to inequalities in health. However, it also showed that the evidence on the effects of chemicals within the community is sparse, not only in the UK. We are using the findings of this report to ensure our activities are properly focused and follow up work is underway on some of the key areas. The outputs will further shape our long term strategy and plans. Internally, we have continued to organise our work into programmes, focused on health outcomes and our strategic priorities, which bring together the range of services across the Agency and ensure that they are working towards common goals. This is beginning to bear fruit as shown in this report and we are working to develop and embed this approach across the Agency.

We have continued to modernise the service, not just the infrastructure and organisation, but turning much more to the way in which we deliver high quality services. We agreed a new policy on Strengthening the Frontline, which is now being implemented to establish stronger, multi-disciplinary Health Protection Units, using common standards and working in a coherent way. We established a new Division to create a microbiology network in the regions, still working closely with local and regional staff, but looking to gain from the synergy such a network can bring.

Nevertheless, this has not been an easy year for staff. The expectations on the Agency increase all the time, and more of our work is under the public scrutiny. Changes such as introducing Agenda for Change and the restructuring of the NHS around them always have an impact on staff. It is to their credit and professionalism that they have continued to deliver a varied and complex range of services to high standards, locally, nationally and internationally.

Health protection is not just the province of the Health Protection Agency. Whilst we might provide the specialist service, much of the delivery is through our many partners and stakeholders. Our aim is to maintain and improve good relationships so that collectively we can give the community the confidence that we are fulfilling our responsibilities on their behalf.

PROFESSOR PAT TROOP CBE

Chapter 1

Preparing for a Pandemic

The Agency's Response

The threat of pandemic influenza received increasing media coverage during the year. This reflects the developing situation in Asia, Africa and now Europe where highly pathogenic avian influenza/A H5N1 has been identified in wild birds, and outbreaks of the virus have been reported in poultry flocks. Since the resurgence of the virus in late 2003, there have been 226 human cases of infection with H5N1 which have resulted in 129 deaths.*

The Health Protection Agency is coordinating many different activities that contribute towards the UK's influenza pandemic preparedness. Our response to pandemic influenza is directed by the Influenza and Respiratory Virus Programme

*June 2006 source WHO

Board (IRVPB). The Local and Regional Services (LARS) Division Pandemic Influenza Implementation Group is responsible for implementation issues involving frontline Health Protection Units (HPUs) and regional teams. The Emergency Preparedness Response Division develops training for health professionals, and designs and conducts exercises to ensure that local health services are prepared for when pandemic influenza occurs. Recognising the growing importance of pandemic influenza preparedness, the Agency established a Pandemic Influenza Office sited at the Centre for Infections in October 2005.

The Agency's work on pandemic and avian influenza is coordinated by the Office. It is supported by many teams and individuals across the organisation and works with national and international experts.

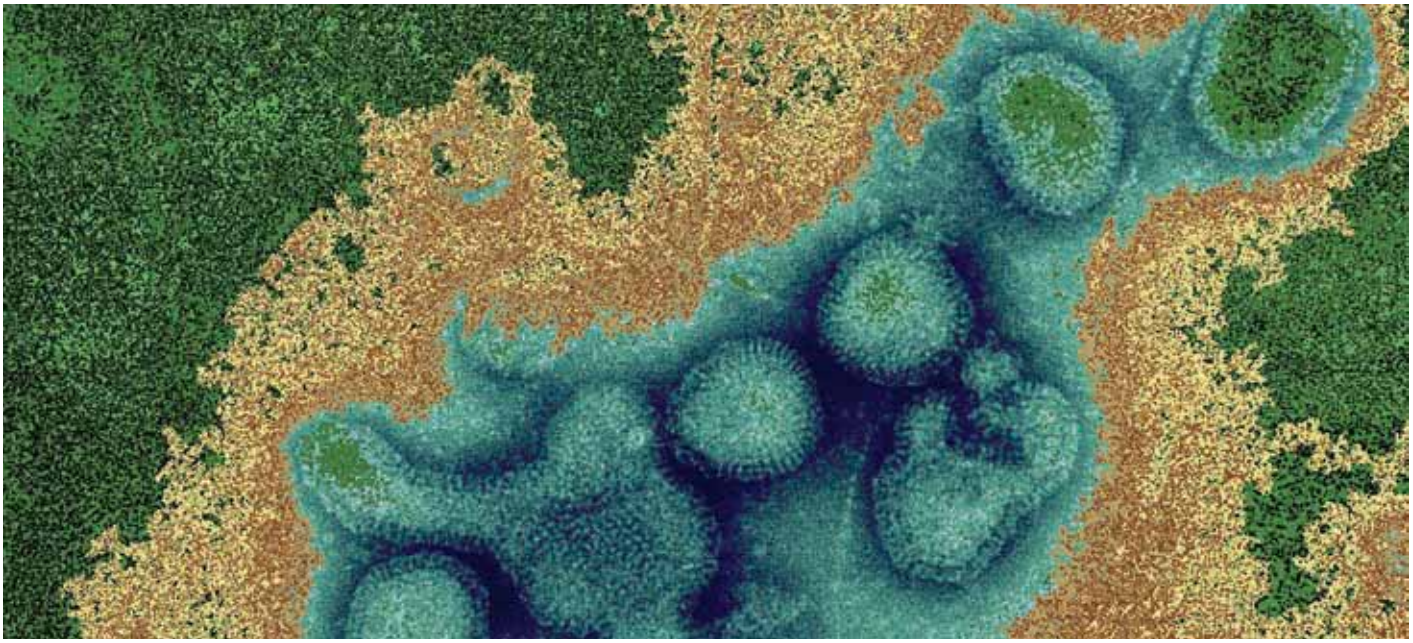
The Agency is responsible for coordinating, developing and distributing guidelines and algorithms to colleagues within the organisation and to partners in the NHS and other organisations. For example, the algorithm for management of returning travellers guides staff through the assessment of a patient with a fever returning from an area of the world where H5N1 is known to be present. It is frequently updated to reflect the changing situation of poultry outbreaks and isolated cases of avian influenza/A H5N1 in wild birds.

The guidelines range from the Agency's Pandemic Contingency Plan to specific pieces of guidance for distinct groups and settings. The Agency Influenza Pandemic Contingency Plan and the Department of Health Influenza Contingency Plan were revised in October 2005, to reflect the new World Health Organisation phases and revised health impact projections. A further substantial revision of our plan is currently underway.

Specific guidance is being developed for funeral directors, prisons, and local authority domiciliary services, among others. All the guidelines draw from the same evidence base to ensure consistency. We produce them in conjunction with the appropriate professional and occupational bodies to ensure the information is relevant and focused. All guidance is shared with the Devolved Administrations and the Department of Health in England to help coordinate preparedness across the UK.

Staff across the Agency are kept informed through the regular Influenza Pandemic Preparedness Update newsletter, prepared and distributed by the Pandemic Influenza Office. Agency staff are able to pose operational and scientific questions to an 'Ask the Experts' section of the newsletter. Guidance for the public is available on our website: (www.hpa.org.uk/infections/topics_az/influenza).

A database to record initial human cases of pandemic influenza in the UK has been developed by the Agency. Training sessions across LARS have begun to roll out across England and it is being shared with the Devolved Administrations to ensure a UK-wide system.



Chapter 1

A module is being developed for the database which will allow collection of data on avian influenza outbreaks in poultry and any human contacts associated with such events.

At local level, frontline Health Protection Units are closely involved in developing multi-agency plans for responding to pandemic influenza across local health and public services. Planning advice and assistance are also offered to business and public utilities.

Internationally, the Agency works closely with WHO and we helped to set the new phasing of the WHO Pandemic Influenza Plan. A continuous watch on the developing situation worldwide is maintained through links with WHO, the newly-established European Centre for Disease Prevention and Control (ECDC) and contact with partners in the Global Health Security Action Group of G7. Pandemic Office monitors all relevant websites daily to ensure the Agency keeps abreast of the developments worldwide.

Agency experts also work closely with other countries to strengthen worldwide preparedness. This has included providing UK-based training for international laboratory staff and sending experts on short visits to overseas locations, including Ukraine, Turkey, Geneva and Turkmenistan. Two Agency physicians are among 10 European experts selected by ECDC to sit on a European-wide scientific panel on influenza.

We also work closely with representatives of the Health Protection Organisations of the Devolved Administrations to ensure coordination of UK-wide pandemic influenza contingency planning activities.

Training Frontline Staff

The Agency has developed an e-learning training package through Doctors.net on the signs, symptoms and treatments for avian influenza. The course was launched on the Doctors.net website in November 2005 and since then more than 14,000 GPs have successfully completed the module to broaden their skills base.

The course presents doctors with mock cases of patients who might turn up at their surgery. These include a holidaymaker returning from Thailand with ‘flu-like symptoms and a patient worried by the recent media coverage on ‘bird ‘flu’ demanding to be vaccinated. GPs must correctly diagnose each patient and decide on a course of action which includes appropriate treatment, whether they should be referred to hospital or told to stay at home and whether to alert the local Health Protection Unit.

Vaccines for Humans

Experts from the Agency's influenza laboratory at the Centre for Infections (CfI) are involved in the development of human vaccines for two strains of avian influenza thought most likely to be involved in pandemic influenza.

In November 2005, Agency staff released details of a 'custom built' virus it had helped to develop, which was to be the first step in the development of an H7N1 vaccine. The virus was created in conjunction with experts from the European Union and pharmaceutical company Sanofi Pasteur as part of European Community funded project.

The virus, called 'RD-3' was created using a technique called 'reverse genetics'. This process is easier, safer and quicker than the traditional seed virus production method of injecting live influenza virus into eggs. The technique could also lead to quicker production of vaccine in the event of pandemic influenza. Sanofi Pasteur is currently using RD-3 to produce a prototype H7N1 vaccine and, later in 2006, Agency researchers will analyse the results of a planned Phase I study.

The influenza team has also been analysing H5 vaccine trials from Europe and Australia since October 2005. The European H5 vaccine data have been analysed and accepted for publication, and analysis of Australian H5 vaccine data has already been presented internationally. These early and key results will guide further vaccine development programmes.

CfI contains one of only two laboratories worldwide approved by WHO to analyse vaccine trial material. Laboratory work involves establishing and validating the effectiveness of both 'reverse genetics' created vaccine strains and traditional wild type H5 strains. Blood samples are used to test antibody responses and this requires specialised high-containment laboratories.

Data derived from these analyses are used to decide what formulas and doses of vaccine are most appropriate for potential H5 vaccines. Work is underway at present to establish the degree of cross reactivity to different H5 strains offered by vaccination with the existing candidate H5 strains.

Laboratory Monitoring/Diagnosis

In 2003, a team working in the Respiratory Virus Unit at the Centre for Infections (CfI) developed a sensitive and specific test for H5N1. In 2005, the test was rolled out to a network of 18 Health Protection Agency and NHS laboratories across the UK and one laboratory in Dublin, Ireland. The intention was to enable testing for H5N1 in the pre-pandemic period and possibly for early cases in Phase 6. Currently the network of laboratories can be used to test returning travellers and people with poultry contact who have potentially contracted H5N1 infection.

A specialist training course for Local and Regional Services laboratories was held in June 2005, and an external quality assessment carried out during October 2005 indicated that the process is robust and working well. These laboratories are now able to produce reliable H5N1 test results for the Agency and the NHS.

Regions also developed their own on-call arrangements, drawing up agreements with neighbouring laboratories to provide support in some cases. The Local and Regional Services Division (LARS) has also arranged reliable courier systems to transport samples. This was originally set up to take specimens to CfI and was extended to take specimens from any NHS hospital to the nearest Agency laboratory in the scheme. This is a significant development for the Agency and reflects a huge amount of effort by both LARS and CfI laboratories.

A secure website was also established which enables the laboratory network to share data and allow ongoing technological development. A monthly teleconference also provides a meeting place for the laboratory network to update and exchange information. Having this coordinated operational network also enables new developments to be rapidly introduced and disseminated.

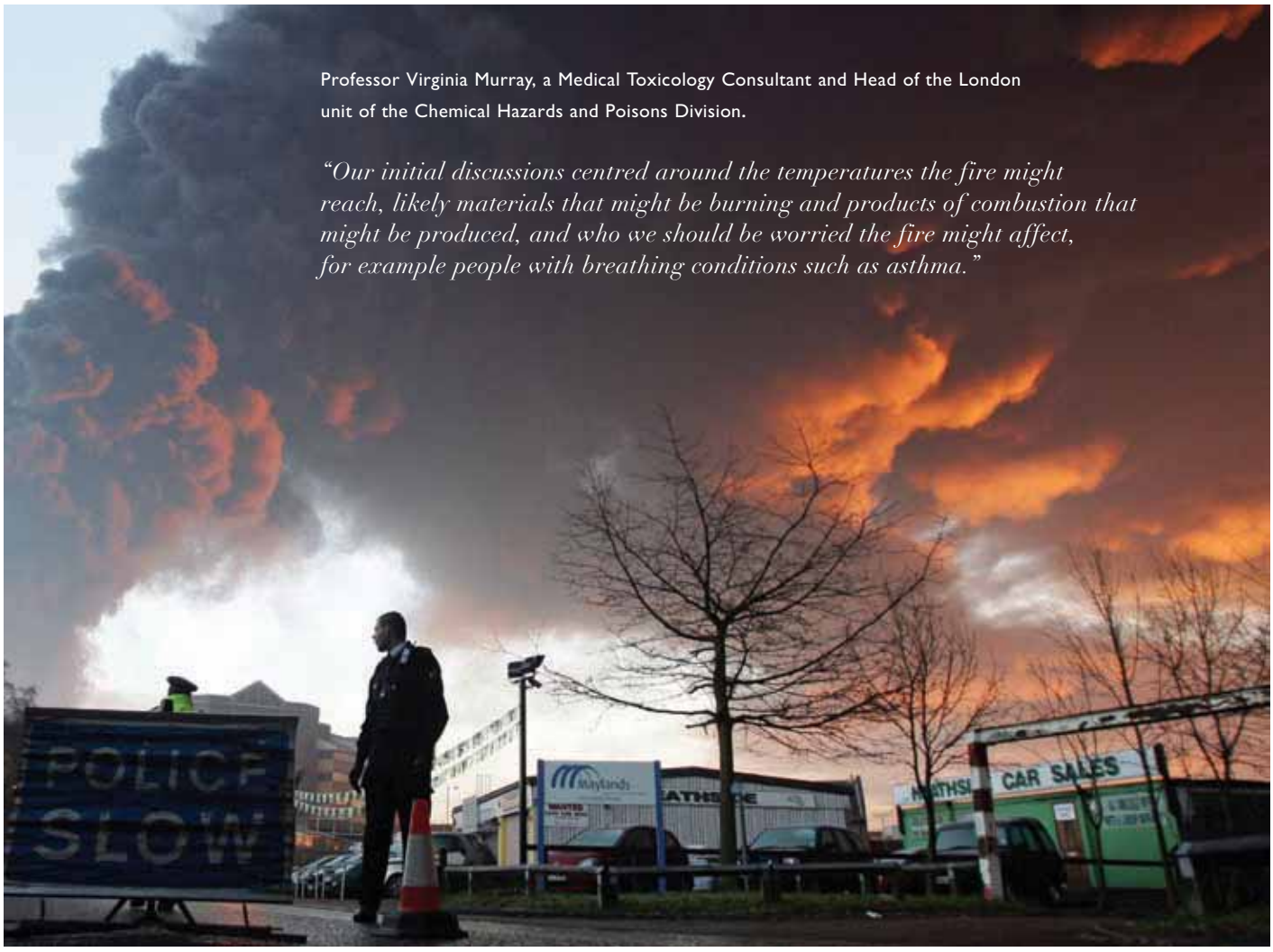
Information on pan-European and national influenza exercises is in Chapter 9.

Chapter 2

Chemicals

The Buncefield Fire

Just after 6.00am on Sunday 11 December 2005, the fifth largest oil depot in the UK exploded into flames. It took four days to bring the fire under control, by which time 22 tanks of diesel, kerosene and aviation fuel at the Buncefield oil depot in Hemel Hempstead had been destroyed. Fumes from the fire caused a black plume of smoke that reached nearly three kilometres above the ground and stretched over an area from East Anglia to Wiltshire. Hundreds of people living locally had to leave their homes. While there were no fatalities, 43 people were reported injured. It was the largest fire in peacetime Europe and the most complex incident to which the Health Protection Agency had responded.



Professor Virginia Murray, a Medical Toxicology Consultant and Head of the London unit of the Chemical Hazards and Poisons Division.

"Our initial discussions centred around the temperatures the fire might reach, likely materials that might be burning and products of combustion that might be produced, and who we should be worried the fire might affect, for example people with breathing conditions such as asthma."

The Agency's immediate concern was to assess the risk to health and provide advice on how to reduce any threat to people in the vicinity or those fighting the fire. Many Agency staff were involved, including specialists in chemical hazards, experts in emergency response and doctors with expertise in public health. Some staff joined the police, fire and other emergency services to provide information on toxic substances that could be released by the fire and the possible health effects of breathing in smoke particulates.

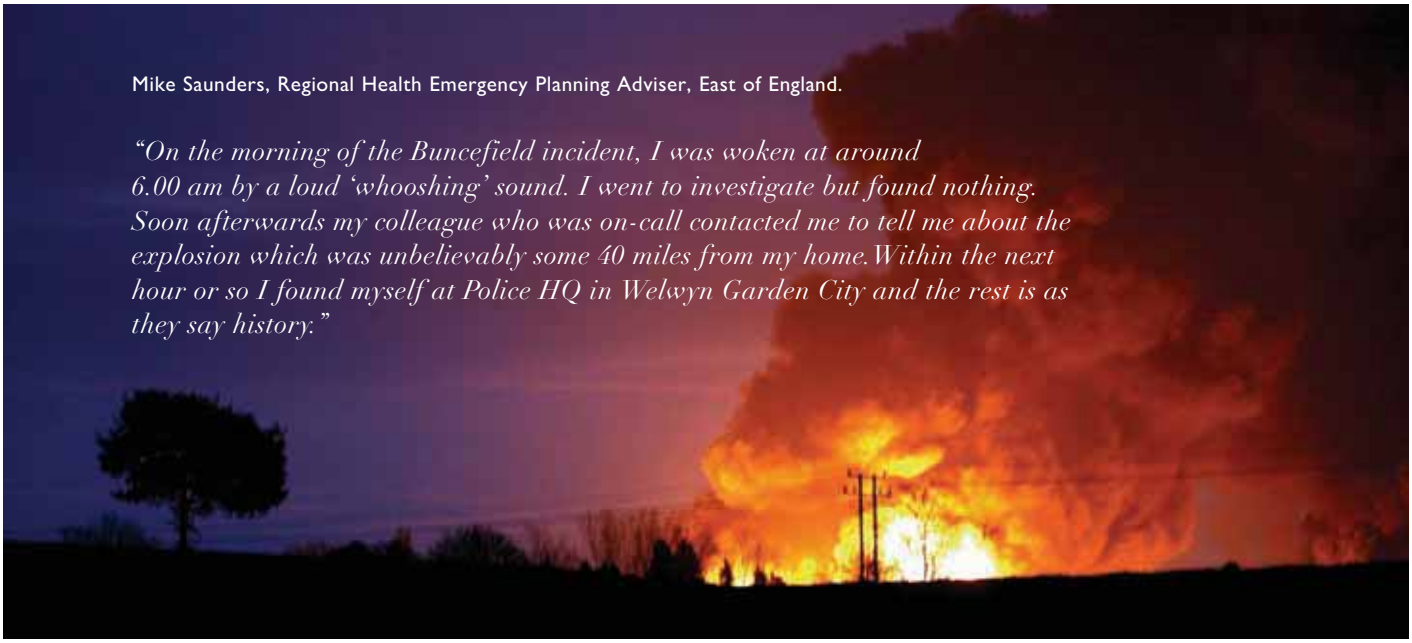
The initial risk assessment, based on previous experience, was that the plume of smoke was likely to pose a minimal risk to health. In the very high temperatures of the fire, it was thought that all organic chemicals in the fuel would be completely destroyed, leaving few pollutants. However, the Agency advised people in the Hemel Hempstead area to "stay indoors, keep windows closed and tune into local media for further updates".

Later, air quality monitoring indicated that the plume was not significantly adding to background air pollution, with particulate levels no worse than those found near a busy main road. The Agency therefore advised the public that the risk to health was low and should not be associated with increased illness. However, caution was still recommended. People with respiratory or heart conditions were advised to be especially careful and to remain inside if they saw smoke or soot particles on window sills and other surfaces outside. Air monitoring and environmental sampling continued throughout the incident and did not identify any pollutants at levels outside the normal range. This supported the initial findings and the appropriateness of the advice given.

The Agency's communications staff worked with local primary care trusts to make sure the health advice was widely disseminated by local and national media. In addition to press releases, a list of frequently asked questions and answers was made available through the Agency's website. Other issues staff had to address included assessing the oil depot site as a public health risk and concerns about ground water contamination. Work continued round-the-clock, with staff taking on night shifts until Friday 16 December when the plume had dispersed.

The Agency's response was led by the East of England Local and Regional Services, working closely with the Centre for Radiation, Chemical and Environmental Hazards, the London and South East Regions and the Centre for Emergency Preparedness and Response. Epidemiologists from the East of England monitored the impact on health, using reports from hospital A&E departments and GPs to determine whether people were suffering from breathing problems.

The incident demonstrated the value of an integrated health protection service, able to work across different sectors and provide comprehensive advice and support. The fire also underlined the importance of planning and preparing for emergencies, which is a core part of the Agency's work.



Mike Saunders, Regional Health Emergency Planning Adviser, East of England.

"On the morning of the Buncefield incident, I was woken at around 6.00 am by a loud 'whooshing' sound. I went to investigate but found nothing. Soon afterwards my colleague who was on-call contacted me to tell me about the explosion which was unbelievably some 40 miles from my home. Within the next hour or so I found myself at Police HQ in Welwyn Garden City and the rest is as they say history."

Chapter 2

The Buncefield fire was the first major environmental incident faced by the Agency. Although the response was effective, valuable lessons were learned about how to improve future Agency response. Following the fire, a multi-agency steering group, chaired by the Agency, was set up to review and monitor the impact on the health of the local population and frontline workers at Buncefield. This follow-up study aimed to establish whether any long-term effects; physical, psychological or toxic were experienced, and to identify any public concerns.

The study involved:

- An occupational health questionnaire for people who responded to the fire, including fire and rescue services, ambulance services, local authority staff, police departments and those involved in caring for casualties, construction and engineering work and environmental sampling.
- Receiving records from Watford and Hemel Hempstead A&E departments were reviewed to identify individuals who had health issues related to the fire.
- Determining whether local people had ongoing concerns. This involves sending a questionnaire to 5,000 residents, including 500 people who were evacuated from homes within one kilometre of the site.
- The first risk assessment, made at the peak of the crisis, that concluded that there was negligible risk from the plume was also reviewed.
- A detailed analysis of all exposure data was also carried out to help organisations conduct similar assessments in the future.

Dr Marian McEvoy, Consultant in Communicable Disease Control,
Acting Director Bedfordshire and Hertfordshire Health Protection Unit.

"Buncefield emphasised the absolute necessity of working with partner organisations and the fact that we still have some way to go in understanding each others' methods and cultures. Building up strong working relationships before disasters happen is increasingly important in today's world."

Dr Sue Ibbotson,
Interim Regional Director for the East of England.

"This incident used resources from five regions and four national divisions in the immediate response and for a week in total. The follow-up work continues to involve a large number of individuals from across the Agency, and will do for a long time to come."

Broomfield Tip Fire

In 2003, excavation work began at Broomfield tip in the Wigan area to tackle a coal-tip fire which had probably been burning for about 18 months before excavation.

As part of the treatment which was organised by the local authority, burning material was dug out and laid out to cool. During this process, which lasted for 12 months, the local population was sometimes exposed to high levels of smoke and fine particles.

The local Health Protection Unit (HPU), along with the local Primary Care Trust, provided advice to the local authority on the best way to manage the excavation and reduce dust exposure to residents, for example, by working on days when the wind was blowing away from people's homes and giving practical advice to residents to avoid exposure.

To address the concerns of local residents, the Agency investigated whether the elevated exposures could cause damage to people's health. A steering group was established with representation and input from the HPU and the PCT, the residents' group, the council, the epidemiology function of Chemical Hazards and Poisons Division and a university statistician.

The steering group designed a questionnaire which was distributed to thousands of residents. It asked about events such as health symptoms. Additionally, data on hospital admissions, prescriptions, GP consultations, visits to A&E departments and absences from school were studied.

Computer programmes taking into account information on wind direction, wind speed, temperature, the local topography and actual measurements of airborne dust levels were used to produce maps of which residents would be expected to have high, medium and low levels of exposure.

Work by the HPU, in collaboration with staff from the Agency's Chemical Hazards and Poisons Division, London, and advisers from the Institute of Occupational Medicine in Edinburgh judged that there is no significant long-term risk to the health of the local population, and that a further long-term study of health was not needed.

Chapter 3

Sexual Health

Chlamydia

Genital chlamydial infection, caused by the bacterium *Chlamydia trachomatis*, is the most commonly diagnosed bacterial sexually transmitted infection (STI) in genito-urinary medicine (GUM) clinics in the UK. In 2004 over 104,000 cases were diagnosed, an increase of 8.6 per cent since 2003 and 223 per cent since 1995, with two-thirds of cases among young men and women in the 16-24 age group.

Chlamydia is easy to treat once detected, but a large proportion of the population, approximately 70 per cent of women and 50 per cent of men, display no symptoms and are unaware of their infection and the need to seek treatment. In untreated women, infection can lead to serious conditions like pelvic inflammatory disease, which can progress to ectopic pregnancy and infertility. Complications among men with untreated infection include urethritis, epididymitis and Reiter's syndrome (chlamydia- associated arthritis). Chlamydia has also been associated with an increased risk of HIV transmission and acquisition. The annual cost of chlamydia and its consequences are estimated to be more than £100 million.

The National Chlamydia Screening Programme (NCSP) in England began in April 2003 as part of the Department of Health's (DH) National Strategy for Sexual Health and HIV. A further commitment was made by the Government in the White Paper; *Choosing Health: Making healthier choices easier*, published in 2004, which identified chlamydia as a new priority area. It stated that implementation of the NCSP would be accelerated with total coverage of England by March 2007, supported by an additional investment of £80 million.

The NCSP offers screening to both sexually active asymptomatic young men and women under 25 years of age in a variety of health and non-healthcare settings outside of GUM clinics. The programme targets a population who otherwise would not have been tested and thus represent a potential 'hidden reservoir' of infection.

The programme aims to:

- Control chlamydia through early detection and treatment of asymptomatic infection
- Reduce onward transmission to sexual partners
- Prevent the consequences of untreated infection.

The Health Protection Agency has been involved with the NCSP since its launch, providing scientific expertise and collecting and analysing all screening data. In November 2005 it took over the operational management of the programme this includes coordinating implementation, monitoring and evaluating the programme.

In the second year approximately 62,000 young people were screened from 26 programme areas at over 870 sites and the prevalence of infection was found to be high, with 10.9 per cent testing positively among women and 11.9 per cent among men. Almost all positive index cases identified through the screening programme were confirmed to have been successfully treated.

The challenge now is to increase the proportion of young people tested, especially in light of the targets set out by the DH in the local delivery plan for chlamydia. The Agency will have a key role in monitoring the outcomes of the NCSP to ensure its effectiveness in reducing the incidence of chlamydia and its consequences among young people in England.

Another vital part of the campaign is to raise awareness of chlamydia and its consequences among the target group of under-25s. Working with the DH, the Agency is involved in producing patient information including a leaflet describing chlamydia and the screening process, and advising sexually active young people where they can have the test.

Chapter 3

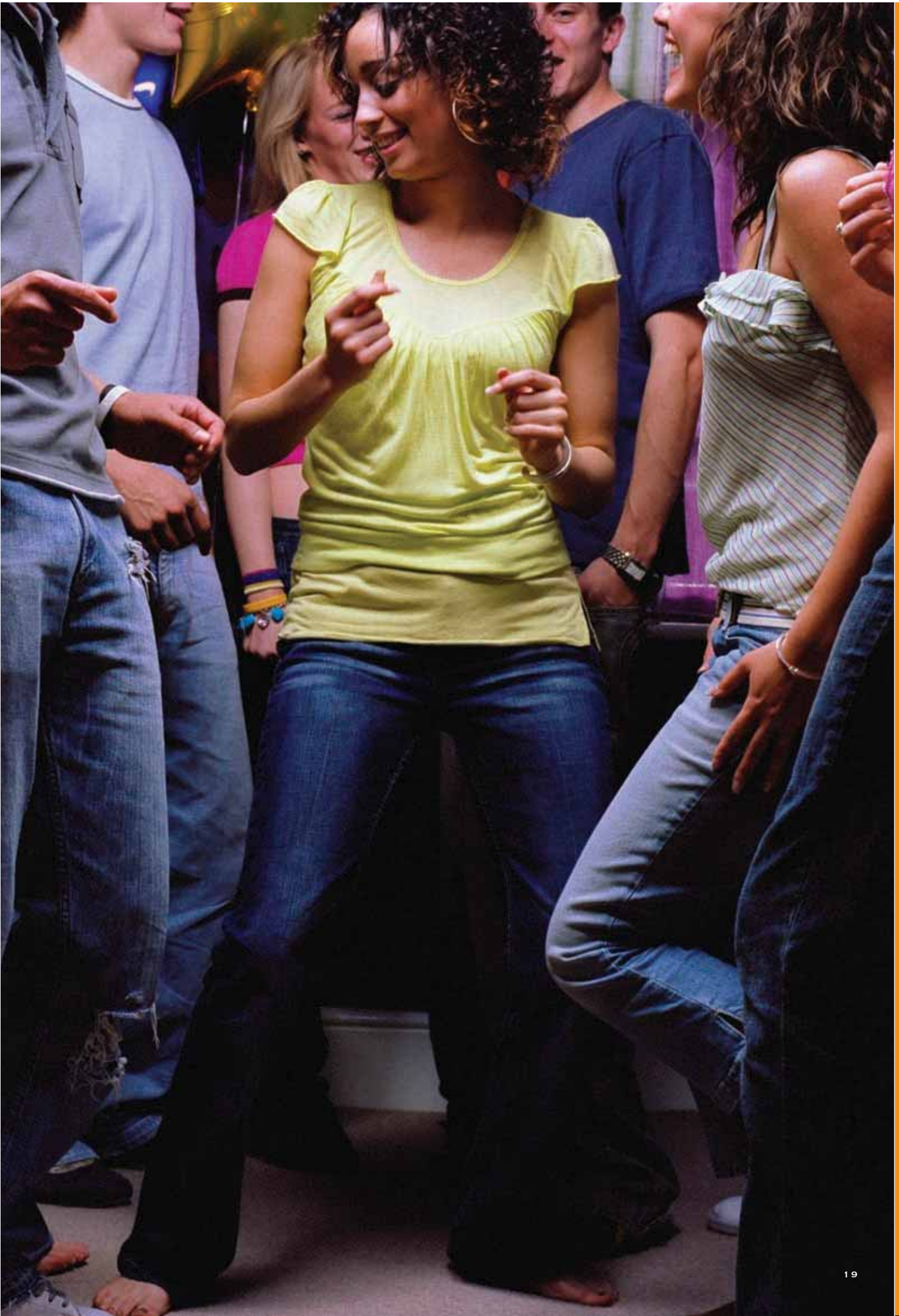
In the Regions

As part of the NCSP, the regional laboratory in Manchester is to carry out chlamydia screening for Greater Manchester's population of 2.3 million people. The contract was awarded by the Greater Manchester Strategic Health Authority in October 2005 and work is due to start in summer 2006.

Staff at Manchester have the specialist molecular diagnostic and IT expertise necessary to develop the first phase of the screening programme. The laboratory will be installing new equipment to provide this high throughput testing programme. A key component of the study is to collaborate with local NHS Trust laboratories to roll out the screening programme in the coming years so that locally-delivered services can be developed.

The Agency's work on chlamydia extends beyond the NCSP. In the Cambridge laboratory, staff have developed and produced their own assays to test for the infection.

This work has brought many benefits to the laboratory including a reduction in the need for repeat testing, and reduced cost to the Agency.



Chapter 3

LGV – an Emerging Infection

Two years ago, lymphogranuloma venereum (LGV) was rarely seen by clinical services in the UK, although it was common in Africa, Asia and South America. Since then, there has been an outbreak of this sexually transmitted infection in the UK among men who have sex with men (MSM), and the number of cases reached 274 at the end of December 2005. Most cases have been seen in London, with a smaller outbreak in Brighton. About 80 per cent of sufferers are also infected with HIV.

LGV is caused by a specific type of *Chlamydia trachomatis* and all cases recently diagnosed in Europe have been of the L2 strain. LGV differs from the more common types of *C. trachomatis* in that infection is more invasive and can cause inflammation, lymph node infection, fever, muscular pain and general ill-health.

Infection can result in severe tissue damage to the genitals and rectum but the disease can be successfully treated with antibiotics and complications are rare in Western countries.

LGV is regarded as a serious emerging threat to sexual health. The Agency chairs the national LGV incident team to coordinate the public health response to the outbreak. Central to this has been the establishment by the Agency of laboratory diagnostic and reference facilities, and the enhanced surveillance system that has gathered information to inform intervention strategies.

Syphilis

Having declined sharply during the 1980s and early 1990s, syphilis, which is caused by the bacterium *Treponema pallidum*, has re-emerged in a series of outbreaks in the UK since 1997. Since the Agency established enhanced surveillance of syphilis in 1999, 5,452 cases have been seen up to the end of 2005. The majority of cases are found in men who have sex with men (MSM) about half of whom are also infected with HIV. The high number of syphilis cases co-infected with HIV suggests that the epidemiology of syphilis has been influenced by developments in the HIV epidemic, including the availability of effective anti-retroviral therapies, increased HIV prevalence, and increased unsafe sex among MSM.

Although diagnoses continue to be centered within high-risk groups, an increased incidence among heterosexuals has been seen. Cases of congenital syphilis have been reported and this represents an emerging public health problem.

The Agency has been faced with a sharp rise in cases during the past few years, and has developed enhanced surveillance initiatives to track the spread of disease and identify the groups most at risk. It is also working with partner groups to promote knowledge about syphilis to inform decision making and choice in sexual relationships.

Rise in HIV Figures

The number of people living with HIV in the UK continues to rise. In a report released to coincide with World Aids Day in November 2005, the Agency and other health bodies reported that the figure now stands at about 58,300. This includes those already diagnosed and an estimated 19,700 who are unaware of their infection. In 2005, an estimated total of 7,750 new cases of HIV were diagnosed.

Data collated by the Agency identifies changing patterns within the spread of HIV. Detailed analysis shows the increase in numbers is mainly due to a continued rise in diagnoses in men who have sex with men, the group which remains most at risk of acquiring HIV in the UK, as well as high diagnoses among heterosexual men and women. Most of the new diagnoses among heterosexuals are acquired outside the UK, the majority of these in Africa.

The number of injecting drug users infected with HIV has also risen to its highest level since 1992. The Agency has issued advice to individuals as well as healthcare professionals, urging anyone who thinks they are at risk of contracting HIV to seek a test through their GP or a sexual health clinic.

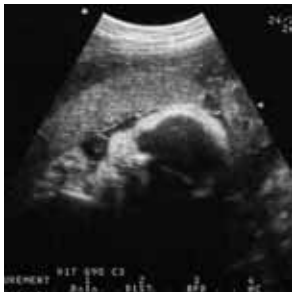
GUM Waiting Times

Poor access to sexual health services can contribute to increases in sexually transmitted infections. Increased demand for help from GUM clinics leads to longer waiting times for patients, and the resultant delay in diagnosis and treatment increases the risk of onward transmission to sexual partners.

Early treatment is key to controlling the spread of sexually transmitted infections, and the public health white paper recommended GUM patients are seen within 48 hours of contacting the service. The Agency carries out quarterly audits of clinic waiting times in collaboration with the British Association for Sexual Health and HIV (BASHH) on behalf of the Department of Health. These show that less than half of patients are seen within 48 hours of first contacting a clinic, although there is considerable regional variation. Access is better in London, with almost seven out of 10 people being seen within that time, compared with less than 40 per cent of patients living in the West Midlands, Yorkshire and Humberside, and the North East.

In the future, with the development of electronic systems, waiting times will be monitored continuously. The Agency will also help prepare a more detailed annual report to assist professionals in this vital sphere of sexual health.

Chapter 4

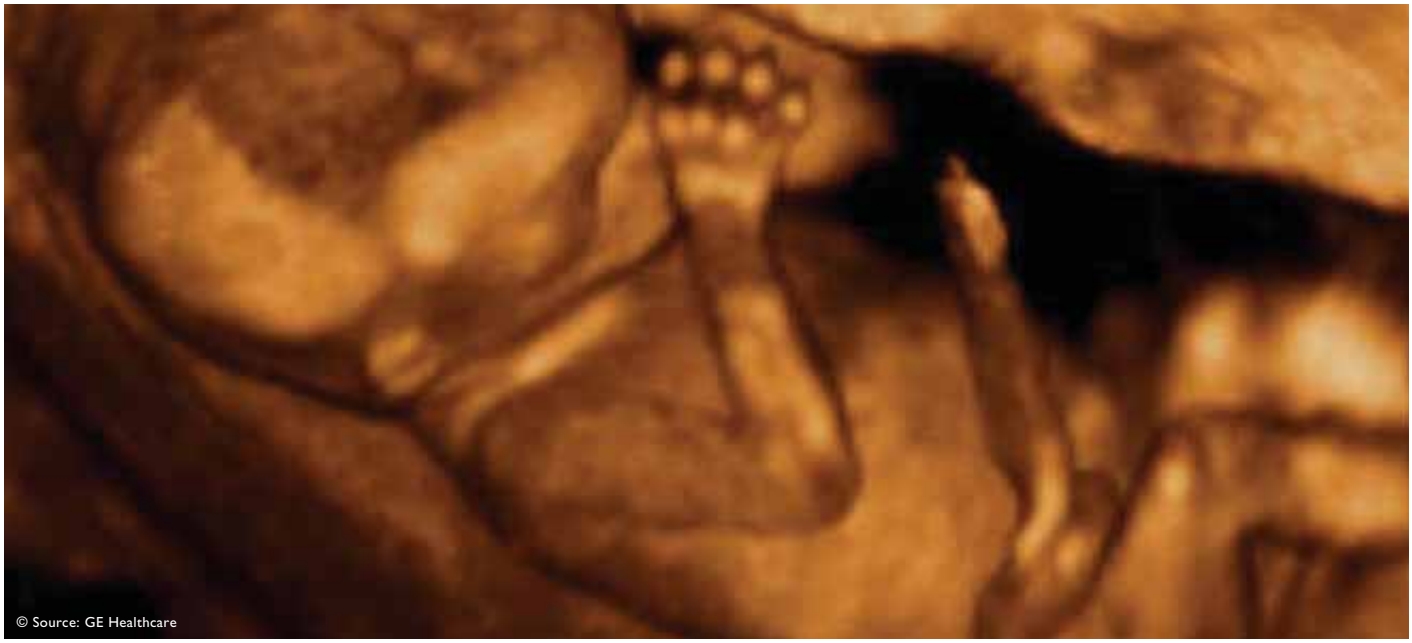


Radiation

Investigating the Health and Safety of Ultrasound and Infrasound

Ultrasound has been used successfully for many years for a range of applications including health protection, the diagnosis, investigation and treatment of disease, and for many industrial applications. These developments have stimulated a great deal of research into the effect of ultrasound on living tissue and other material, and have led to increasingly sophisticated medical scanning, treatment techniques and equipment design. Infrasound has been less well investigated but it can, under some circumstances, present a potential hazard to health so needs further scientific investigation.

In 2005 the Agency's remit covering non-ionising radiation (NIR) was extended to include ultrasound and infrasound. Examining the health aspects of ultrasound and infrasound is a new role for the Agency.



Gathering expertise and information

Ultrasound is a specialised area covering a wide range of medical and non-medical applications, and it was clear that specialist information was needed in order to assess the likely importance and extent of health and safety issues. A workshop was organised with invited international experts covering a range of ultrasound and infrasound topics and applications, held in collaboration with the International Commission on Non-Ionizing Radiation Protection (ICNIRP), with support from the Department of Health DH.

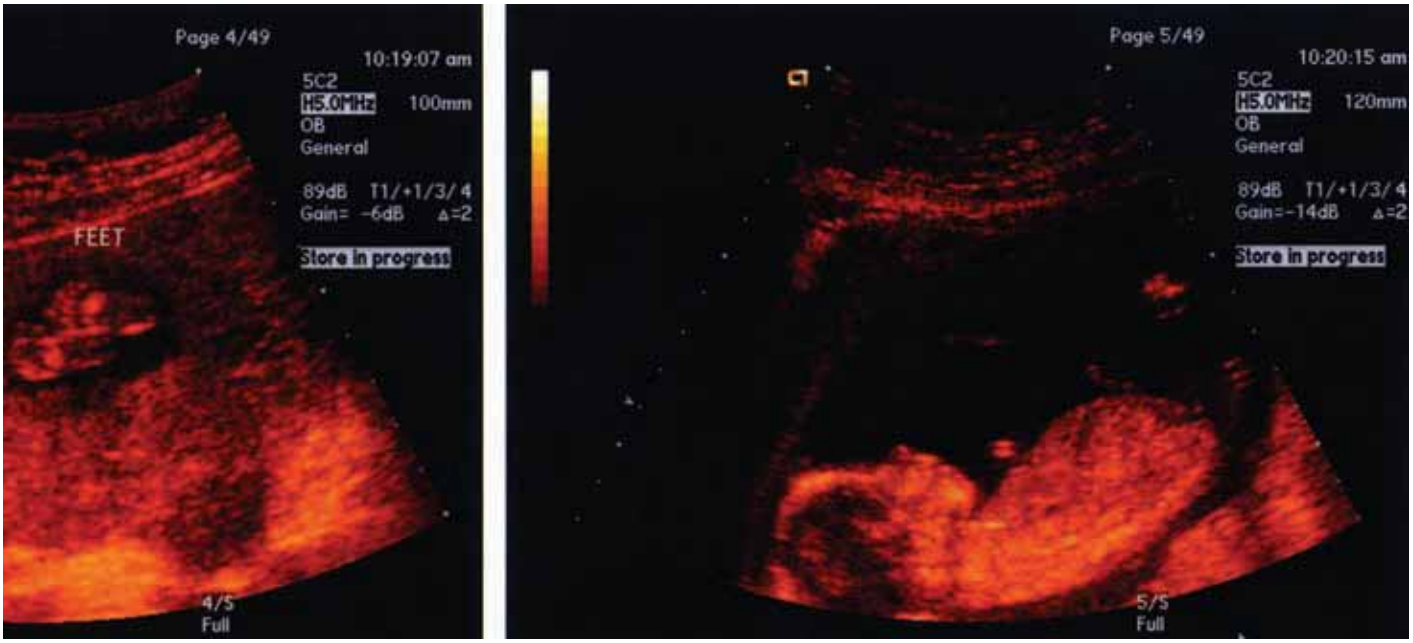
It brought together experts from different disciplines, including medicine, epidemiology, medical physics, biophysics, biology and engineering to provide reviews and discuss what is known about possible adverse health effects and provide overviews of technological advances both in medicine and in industry. It is clear that ultrasound has become an essential tool in medicine, capable of providing high quality images and a potentially important non-invasive surgical tool.

Ultrasound in medicine is familiar to most people because it is used to scan unborn babies. Where it is used by trained medical staff, there are clear benefits to the unborn baby and to the mother. Over the years it has developed into a routine procedure that has found widespread acceptability, as well as enthusiasm for its use among parents-to-be, manifested in the commercial availability of ultrasound photographs and videos. But it is important to continue research towards improving the quality of information obtained from ultrasonic scanning while minimising any possible harmful exposure.

The Agency's independent Advisory Group on Non-Ionising Radiation (AGNIR) was also asked to review the epidemiological and biological evidence for possible adverse health effects of ultrasound exposure. This review is currently in progress.

The use of high intensity ultrasound for medical treatment is an exciting and rapidly developing area. Clinical trials are underway to investigate its benefits including accelerating bone repair, treatment of soft tissue injuries, and cancer treatment. Another area of research is its use in improving drug and gene therapy.

In addition, ultrasonically-powered tools are used in dentistry and surgery. The safety implications of using high intensity ultrasound in surgery and to treat medical conditions are clearly very different from those for diagnostic ultrasound. For these high power devices the concerns, apart from operator safety, are mainly for accurate targeting



of the ultrasound whilst avoiding any damage to other tissues. Research studies and clinical trials are underway to evaluate this.

Ultrasound, often of high-intensity, is used extensively for non-medical applications in industry including; materials testing, fault location, cleaning, drilling and welding. One of the most exciting fields in current research on industrial applications is sonochemistry. Here, processes and techniques are being developed that can be used in environmental protection, materials processing and food technology. Where high intensity ultrasound is being used, it is important that we assess any risks to ensure the safety of those operating equipment.

Adverse health effects associated with exposure to infrasound and low frequency noise are less well understood, but concerns exist about the safety of these acoustic waves. While adverse health effects are unlikely at levels normally experienced in the environment, it is important to establish if exposure below hearing thresholds at these low frequencies can cause damage.

The way ahead - an evidence-based approach

We will continue to work with external experts and will carefully assess the information obtained from our workshop and the AGNIR's review of the evidence for possible adverse health effects of ultrasound exposure. We will consider what actions are required on the basis of the evidence for harm and what programme of work within the Agency and elsewhere would tackle this most effectively. We will also continue to work with our international partners in relation to the development of exposure guidelines and collaborative research.

New Personal Dosimetry Systems

The Agency promotes the health of radiation workers by providing services which help employers fulfil their health and safety obligations. We provide radiation protection advice and training, instrument testing, and the routine assessment of radiation doses received by individual workers.

Individual doses are assessed using radiation dosemeters, often called “radiation badges”, which are worn for a fixed period and returned to the issuing laboratory for processing. The Agency’s Dosimetry Service (PDS), part of the Centre for Radiation, Chemical and Environmental Hazards, operates several services which assess doses from gamma-, beta- and X-radiations, from neutrons and from radon. The Personal Dosimetry Service uses body “badges” and extremity dosemeters, which measure doses to the fingers. The service covers approximately 60,000 workers at 4,500 separate employer sites in the medical, dental, veterinary, industrial and research sectors.

We are currently completing a project to replace the system which issues and processes thermoluminescence dosemeters (TLDs). TLDs account for the majority of dosemeters issued by the Personal Dosimetry Service. They work by storing the energy received

from the ionising radiation until they are heated (to 250°C) when the energy is released as light, which is collected and measured. These operations are performed in automated readers linked to sophisticated computer systems. Since 2000, the availability of new luminescence materials and the need to measure lower occupational doses has led to important innovation and change.

The change covers both the method of heating and the TLD material used, which provides higher reader reliability and the assessment of smaller doses for both whole body and extremities. New automatic readers have been commissioned and new finger and body dosemeters designed. In the case of the extremity dosemeter, we worked with suppliers and a number of other UK dosimetry services to promote design and type-testing.

The different characteristics of the new thermoluminescence material meant a modified design was needed for the plastic holders used for the body TLD cards. The new design, which will be used exclusively by the Agency, has now been developed for testing.

Clients started using the new extremity dosemeter during the first half of 2006, and the new body TLD system will be launched in October 2006.

Radiation and Leukaemia

It is well documented that high doses of radiation increases the risk of leukaemia in people; however it remains uncertain whether effects also occur at very low doses. Epidemiological studies may not be sensitive enough to detect radiation effects at low doses so specialist knowledge on the effects of radiation on the DNA within certain cells in the body (stem cells) is required.

Staff in the Radiation Protection Division have, for some years, been studying the mechanisms of radiation-induced leukaemia, specifically acute myeloid leukaemia and have published scientific papers which identify specific genes that are either triggers for leukaemia or make people more likely to develop leukaemia if they carry that particular gene. The effects on the cell of mutations in one key gene are being studied in collaboration with colleagues at the Centre for Infections.

Chapter 5

Healthcare-Associated Infections

Management, Prevention and Surveillance of Healthcare-Associated Infections and Antimicrobial Resistance

Drug-resistant bacteria and viruses are a serious healthcare problem. They make infections more difficult to treat, increasing suffering and death. Methicillin-resistant *Staphylococcus aureus* (MRSA) is well known as a cause of infections in hospitals, but other microbes, including multi-resistant *Escherichia coli*, glycopeptide-resistant enterococci and carbapenem-resistant *Acinetobacter* have also emerged. The Health Protection Agency plays a central role in monitoring healthcare-associated infections and antimicrobial resistance and advising on prevention and control measures.

The Agency's routine responsibilities include:

- Nationwide surveillance to monitor the trends in existing resistant strains; detecting and investigating emerging resistance, and surveillance to assess the success of control strategies.
- Alerting the NHS about new and emerging resistance problems, and advising on how to control antimicrobial resistance and healthcare-associated infections.
- Research to investigate the genetic mechanisms causing antibiotic and antiviral resistance, and the development of new methods to detect resistance and assess the effectiveness of new antibiotics.
- Chairing a rapid review panel to assess new products and techniques for preventing the spread of healthcare-associated infections.

Drug-resistant organisms will continue to evolve. The challenge is to identify novel types of resistance, understand how pathogens become resistant, measure their prevalence, and devise policies to minimise their spread. Some initiatives taken in the past year illustrate the Agency's work.

Antimicrobial resistance

MRSA - More than 7,250 people in England suffered bloodstream infections caused by MRSA in 2004/05, surveillance work by the Agency showed. Rates of bloodstream infection have stabilised in recent years after dramatic rises in the 1990s. Work to combat this infection, however, continues apace.

In 2005, the Agency developed and introduced an enhanced surveillance system to collect more comprehensive details for each case of MRSA blood poisoning. The scheme enables NHS Trusts to input cases of MRSA blood poisoning on to a web-enabled reporting system and access results in real time. This provides a better picture of the situation and more evidence regarding risk factors for infection.

The Agency launched a study into MRSA bloodstream infections in children under 16 to determine how frequently this group is affected and who is at the highest risk of infection. We also began work with the Office for National Statistics (ONS) to link surveillance data on healthcare-associated infections held by the Agency with mortality data held by the ONS. The project will initially target MRSA.

Chapter 5

Multi-resistant *Escherichia coli* - The Agency published two major reports* during the year to highlight the problem of pathogens that can resist antibiotics, antivirals or antifungals.

One report made recommendations for tackling the increasing number of infections caused by new, highly-resistant, strains of *E. coli* that produce enzymes called extended-spectrum beta-lactamases (ESBLs). These new strains produce a particular type of ESBL called the CTX-M type. They can destroy the penicillin and cephalosporin antibiotics that are widely used in hospitals, and are resistant to several other antibiotic classes. Bacteria with CTX-M enzymes were unrecorded in the UK before 2000 but have become widespread since 2003, affecting patients in hospital and in the community.

The Agency's recommendations included: increased surveillance to identify emerging resistance, and improved guidelines on the laboratory detection of ESBL-producing bacteria and on the treatment and control of infections.

Agency scientists have worked with laboratories around the country to enable better diagnosis of infections caused by multi-resistant *E. coli*, provided advice on appropriate treatment and support for those investigating outbreaks of infection, and carried out surveys to establish the extent of the problem.

Healthcare-associated infections

Infections caused by the bacterium *Clostridium difficile* have increased markedly in recent years. Infection usually occurs in healthcare settings after people have taken antibiotics to treat another illness. Elderly patients with other underlying diseases are most at risk. Diarrhoea, serious intestinal complications and sometimes death can occur. In 2004, the Agency introduced mandatory reporting of cases of *C. difficile* in people over 65. NHS Trusts reported 44,488 cases that year.

In 2005, the media reported outbreaks of *C. difficile* infection at a number of hospitals, including Stoke Mandeville in Buckinghamshire, where deaths had occurred and 300 people had been infected since 2003. The Agency identified that a new strain, type 027, predominated in these cases. It worked closely with the Department of Health (DH) and Thames Valley Strategic Health Authority to ensure appropriate action was taken by the hospital.

To establish what steps NHS Trusts in England were taking to control *C. difficile*, the Agency undertook a joint survey with the Healthcare Commission. Interim results showed that 40 per cent of Trusts did not routinely follow government guidelines on the management of *C. difficile* infections and reporting of outbreaks in hospitals. More than one third did not have restrictions to prevent the inappropriate use of antibiotics and, despite concerns that the infections were becoming more severe,

*Investigations into multi-drug resistant ESBL-producing *Escherichia coli* strains causing infections in England: Andrew Pearson, David Livermore, Brian McCloskey, Georgia Duckworth, September 2005.

Antimicrobial Resistance: Inevitable but not unmanageable: David Livermore, Deenan Pillay, Patricia Cane, August 2005.

most Trusts did not routinely collect vital data on the strains of *C. difficile* infecting patients.

In response to these findings, the Chief Medical Officer reminded Trusts of the need for effective procedures to control *C. difficile* and to comply with the Agency's mandatory surveillance scheme. DH also commissioned the Agency to lead a review of the existing guidance on control of infection with *C. difficile*.

Healthcare Workers - Monitoring and Providing Advice on Preventing Infections

A programme to monitor the numbers of healthcare workers contracting blood borne viruses in healthcare settings has been in place since 1997. It focuses on cases of HIV, hepatitis B and hepatitis C.

It was set up in response to evidence that healthcare workers were becoming infected with blood borne viruses from patients either through needle stick injuries or through splashes of fluids to the eye or mouth.

The programme, run by the Health Protection Agency, monitors not only incidents of infection, but also treatments and outcomes, including the types of drugs used, prophylaxis and vaccine where appropriate, and side effects.

It also aims to identify the risk factors surrounding the transmission of blood borne viruses to healthcare workers by understanding the factors necessary for an infection to occur. This includes collecting data on the type of exposure, the staff involved and circumstances surrounding exposure episodes.

All the data collated are used to inform the development of national prevention policies. For example, data that the Agency produced on the HIV post-exposure group was used in 2004 to change policy on the use of antiretroviral drugs in healthcare workers.

The programme has also been useful in identifying areas where there are gaps in the provision of care for healthcare workers. For example, up until now, the surveillance programme has not sought specific follow-up information on healthcare workers exposed to fluids from a patient with hepatitis B. The Agency has identified this as an issue for ensuring best care is obtained for healthcare workers and is currently reviewing whether there needs to be a change in practice.

The Agency has also highlighted, and continues to do so, the inconsistencies in the implementation of guidelines in hepatitis C post-exposure testing of healthcare workers, with the aim of ensuring better adherence to guidelines.

The programme also provides evidence of best treatment practices. It has shown the effects of early treatment when infections of hepatitis C have occurred. In the six cases where infection has occurred and treatment with antiretroviral therapies has been prompt, all have been cleared of the virus as a result.

In addition to monitoring cases of healthcare workers being infected by patients, the Agency monitors cases of patients infected by healthcare workers. It does this as part of the UK Advisory Panel for Blood Borne Viruses Infected Healthcare Workers (UKAP).

The Agency's responsibilities as part of this panel include reviewing scientific literature and making recommendations for changes in national policy.

UKAP also provides advice on the requirement for 'look back' exercises. These are national patient notification exercises to identify whether patients have been infected by a healthcare worker who may have HIV, hepatitis B or hepatitis C. In 2005, the Agency coordinated two large look-backs involving more than 30 hospitals spanning a period of 24 years (1981-2005).

Chapter 6

Infections

Malaria - Spotting the Unusual

Approximately 1,750 cases of malaria are imported into the UK by people returning from visits abroad each year, and between five and 15 of these prove fatal. But malaria can be avoided by taking anti-malarial medication and following other preventive advice.

The Health Protection Agency's Malaria Reference Laboratory (MRL) is responsible for confirming infection with malaria, identifying the species of malaria responsible, and monitoring trends. It works closely with the Travel and Migrant Health Section (TMHS) of the Centre for Infections which collates national information and reporting on a range of travel-associated infections.

As part of the Agency's enhanced surveillance work, the MRL sends a patient report form to the doctor treating the patient to gather detailed information about the case. Information is stored on a database enabling the team to identify any links between cases.

In early December 2005, the Agency became aware that higher than usual numbers of people returning from The Gambia were developing malaria; several people had died and others were being treated in intensive care. The database highlighted further cases; and follow-up by the MRL and TMHS identified that most of the cases had failed to take prophylaxis.

© Photographer: James Gathany / CDC Website

Increasing malaria awareness in travellers became a priority. Within a week, the Agency issued an alert in its Communicable Diseases Report (CDR) Weekly which has more than 5,000 subscribers, mostly public health workers, from across the UK. The Agency's press office issued information through the media that malaria is a preventable disease but that travellers need to get advice and take the proper precautions.

Following the alerts, the team continued its surveillance and laboratory confirmation and identified more cases. As these appeared, the Agency issued another media release to target the travel trade press.

Between 10 October 2005 and 12 January 2006, there were 27 cases of malaria, including three deaths, in people returning from The Gambia; seven were known to have been treated in intensive care units.

Of the 27 cases, 20 were holiday makers. Information about the use of prophylaxis was available for 25 of the 27 cases: 13 took none, and six took inadequate prophylaxis. This highlights the fact that imported malaria in the UK is strongly associated with failure to take malaria prophylaxis.

The coordinated work and expertise of the Agency's staff enabled them to identify quickly and react swiftly to an emerging problem. Further work is underway within the Agency to raise awareness of malaria and its prevention among travellers.

Wound Botulism

Botulism is a disease caused by neurotoxins produced by the bacterium *Clostridium botulinum*. It is common in the environment, including in the soil. There are three naturally occurring forms of this disease in humans: food-borne, intestinal and wound botulism.

The effects of the neurotoxin are similar for all these forms of the disease and result in a descending paralysis which, in the most severe cases, is life threatening.

All forms of botulism are rare in the UK. However, in 2000, staff in the Agency detected wound botulism as an emerging problem. Clinicians working with injecting drug users (IDUs) were recognising *C. botulinum* wound infections (wound botulism) in this group for the first time.

There are no records in the Agency of wound botulism in the UK prior to the end of 1999. However this disease had been reported in other countries, particularly in patients with traumatic wounds and in injecting drug users.

Surveillance by the Agency identified wound botulism as an emerging problem in the UK: five cases of wound botulism were detected in 2000; a further 24 had occurred by the end of 2002; and an additional 82 cases occurred during 2003-05.

Chapter 6

This upsurge has resulted in wound botulism amongst IDUs becoming the most common form of this disease in the UK and since each case requires intensive and prolonged treatment, this represents a considerable cost to the NHS each year.

On becoming aware of the problem, the Agency undertook a series of measures to prevent further disease. It improved laboratory diagnosis and enhanced surveillance to understand better the risk factors for infection.

It also issued information to help medical professionals manage cases and provided advice for IDUs to prevent further harm.

One of the major risk factors for wound botulism among heroin users is the practice of "skin-popping" and/or "muscle-popping" (injecting the drug into the skin or muscle). IDUs use acid to prepare drugs for injection. The availability of higher purity heroin results in more acidic solutions being injected, which is likely to cause greater tissue damage and may allow *C. botulinum* a better chance to establish an infection.

In light of this, advice issued by the Agency to IDUs included: smoke heroin rather than inject it; if injecting, do so intravenously; and use as little citric acid as possible. Finally, if swelling, redness or pain occurs at injection sites, they should seek medical advice immediately.

Escherichia coli

In the autumn of 2005 the Agency was involved in the investigation of the biggest ever outbreak of the O157 strain of Vero cytotoxin-producing *Escherichia coli* (VTEC O157) in England and Wales.

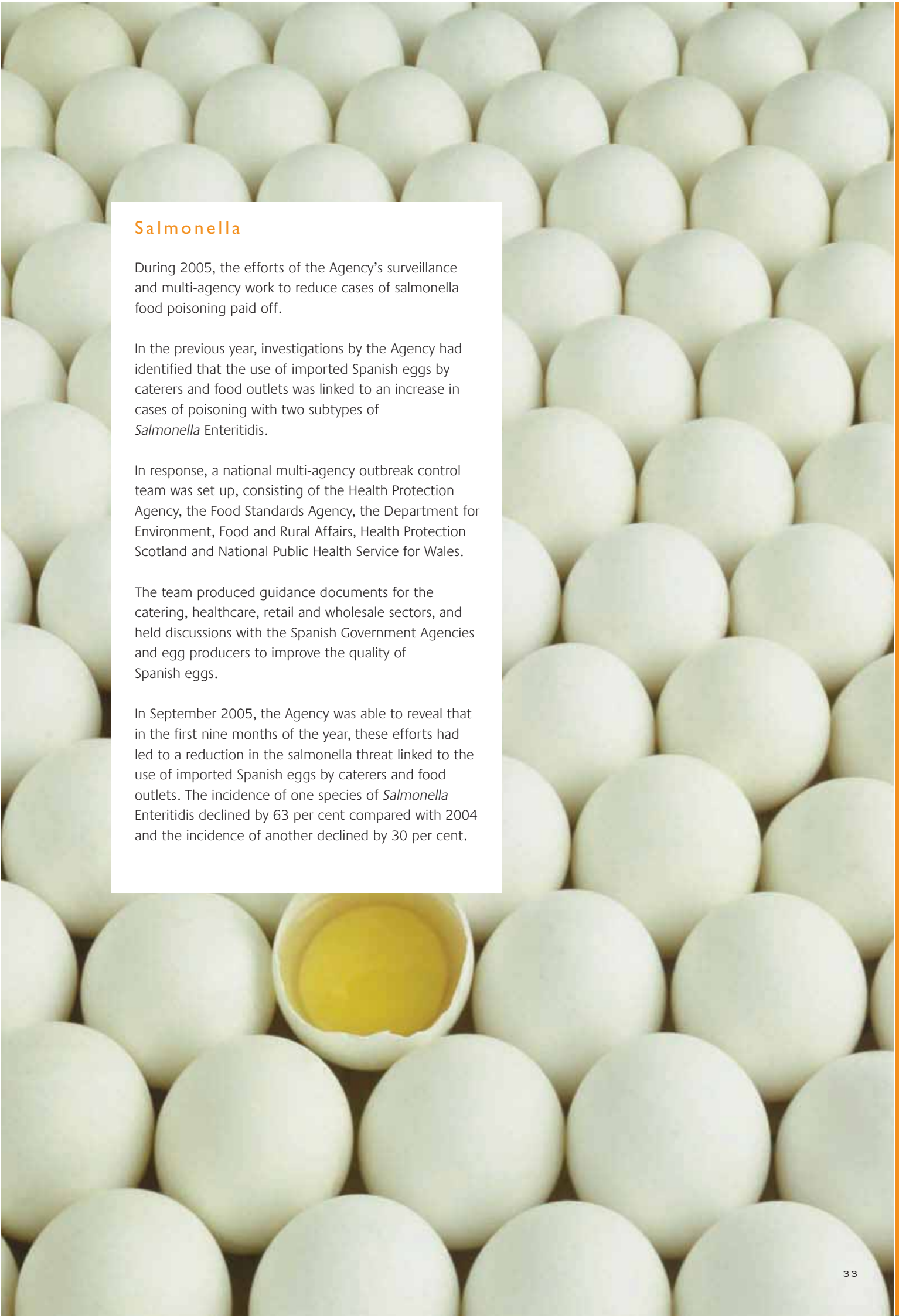
The outbreak was initially reported in Rhondda Cynon Taf and Merthyr Tydfil, later spreading to Bridgend and Caerphilly and affecting children at 42 schools. More than 150 people, mostly children, were infected with VTEC O157 in an outbreak associated with school meals across south Wales. One child died as a result of the infection.

Strains from patients and suspected food samples were sent to the Agency's Laboratory of Enteric Pathogens in the Centre for Infections, London.

The team confirmed the subtype of *E. coli* in 107 cases and five separate food samples.

They used a technique called pulsed field gel electrophoresis (PFGE) in the investigation process. It was essential for ongoing inquiries into the outbreak and showed that the strains from the patients and the food were the same, thereby confirming the food as the source of the infection.

Once Agency researchers had identified the source of infection, meat from a particular butcher's shop, the authorities could enforce measures to stop produce from the establishment entering the food chain and prevent further infections.



Salmonella

During 2005, the efforts of the Agency's surveillance and multi-agency work to reduce cases of salmonella food poisoning paid off.

In the previous year, investigations by the Agency had identified that the use of imported Spanish eggs by caterers and food outlets was linked to an increase in cases of poisoning with two subtypes of *Salmonella* Enteritidis.

In response, a national multi-agency outbreak control team was set up, consisting of the Health Protection Agency, the Food Standards Agency, the Department for Environment, Food and Rural Affairs, Health Protection Scotland and National Public Health Service for Wales.

The team produced guidance documents for the catering, healthcare, retail and wholesale sectors, and held discussions with the Spanish Government Agencies and egg producers to improve the quality of Spanish eggs.

In September 2005, the Agency was able to reveal that in the first nine months of the year, these efforts had led to a reduction in the salmonella threat linked to the use of imported Spanish eggs by caterers and food outlets. The incidence of one species of *Salmonella* Enteritidis declined by 63 per cent compared with 2004 and the incidence of another declined by 30 per cent.

Chapter 7

Frontline Response to Incidents and Outbreaks

Local and Regional Services (LARS) provide support and expertise during outbreaks and incidents around the country which threaten the health of the local community. LARS staff work collaboratively with colleagues in the NHS, local authorities and many other organisations. They are also involved in research projects and training and work closely with the Agency's national specialists.

North East

Investigating Lead Levels in Children's Teeth

In September 2005 environmental scientists from the Agency in the North East and researchers from the University of Newcastle called in the tooth fairy to help them find out more about levels of lead in local children.

The project is dubbed the Tooth Fairy Study because it involves asking the parents of children between the ages of six and eight to donate one of their child's milk teeth after it falls out.

Teeth are being used because lead is known to accumulate in them. The research team hopes to collect up to 500 upper middle front teeth which will be sent to a laboratory in Hamburg, Germany, for analysis.

The 15 primary schools taking part represent a cross-section of the community in Newcastle. Parents will be asked to complete a lifestyle questionnaire to help identify any factors responsible for environmental exposure to lead.

In addition to determining the levels of lead found in children in Newcastle the study aims to increase understanding of the substance, its effects on children's health and whether levels vary across the city. The study is expected to take two years to complete.

North West

Primary School Hygiene and Hand Washing Initiative Pilot

Infectious diseases that cause gastrointestinal upsets and respiratory conditions are responsible for a significant amount of absenteeism in schools. Good hand hygiene has a well recognised roll in preventing this.

In an attempt to reduce the numbers of school days children lose because of avoidable infections, the Agency in the North West ran a pilot scheme to promote good hygiene among pupils.

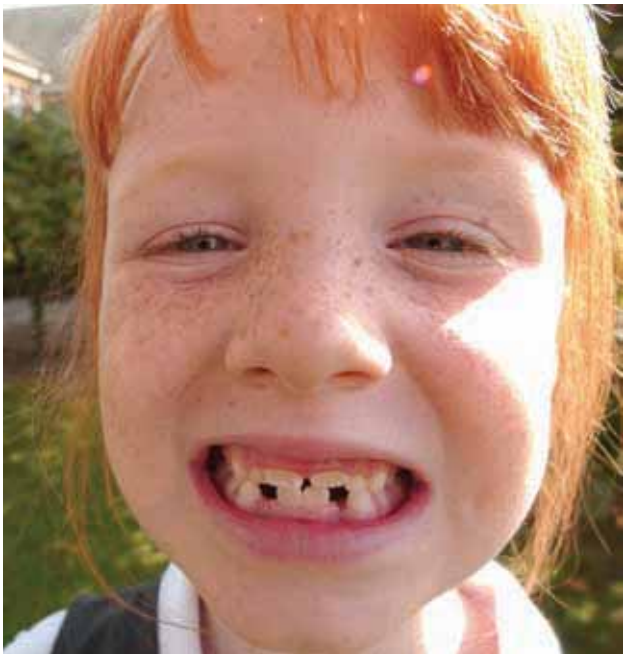
The Agency worked with 12 schools in the region, interviewing staff to ascertain the obstacles to good hygiene practice. It found issues such as a lack of soap or hot water often meant children were unable to wash their hands properly.

Staff were also asked for their views on a range of existing educational resources. Based on the findings, the Agency developed a pack that schools could use within the national curriculum. The project used lessons such as art and science to promote understanding of infections, how they spread and what children can do to prevent avoidable illnesses.

The packs were piloted in 10 schools. The feedback was largely positive. Teachers said, "The children were enthusiastic and were still talking about hand washing two weeks later." Even the teachers were washing their hands more thoroughly.

Two of the participating schools also conducted quizzes to evaluate changes in the children's awareness. This showed a 44 per cent increase in knowledge of hand hygiene.

This work will now be piloted in a greater number of schools in another region. The intention is that it can eventually be rolled out nationally.



Chapter 7

Yorkshire and Humber

First Measles Outbreak in More than a Decade

South Yorkshire Health Protection Unit (HPU) coordinated the response to a severe outbreak of measles across Doncaster in early 2006, when 97 suspected cases occurred.

Prior to this event, only one confirmed case of the disease had occurred in Doncaster since October 1994.

In January 2006, the HPU received reports of measles in the traveller community, in a local playgroup and in one isolated case. Staff found no direct links between the three incidents and, over subsequent weeks, cases were seen across the area and in a range of ages.

During the outbreak, Agency staff produced briefings for clinical staff on recognising and treating measles, and provided infection control advice for health professionals and epidemiological reports and information for the outbreak control committee.

Agency staff informed all organisations working with children about the outbreak and liaised with those affected to establish a database of notified cases. They also handled the significant local and national media interest.

The outbreak showed that the number of children without immunity to measles is steadily increasing and that healthcare professionals and parents are now unfamiliar with the disease. The lessons learned from the outbreak are being shared across the Agency and the health community.

East Midlands

Bursary First for Students

The Agency in the East Midlands developed a programme which enabled university students to gain formal experience with the Health Protection Agency as part of their degree.

The Agency offered two bursaries for two students in environmental health at the University of Derby and Nottingham Trent University. The bursary enabled the student's to take a three-month placement with the Agency which formed part of their practical requirements for their degree. The students worked alongside the Agency's experts and completed a project determined by them.

The projects had relevance to real-time working situations and examined important issues and ideas concerning Legionnaires' disease and cryptosporidium, areas that are important to both the local authorities and the Health Protection Units that took part in the projects.

The idea behind this approach was to provide each student with the best possible experience of health protection work on the ground.

An evaluation by the Agency's training officer found that the students, the HPUs and the universities considered the project to be a success, and at least one placement will be offered again, but this time in partnership with a local authority.

The benefits have been reciprocal: one HPU lead has identified the need for employing environmental health officers in HPUs to complement the team's skill mix.

West Midlands

Influenza B and Norovirus Infections in Schools

In February 2006 the Agency in the West Midlands began receiving reports of norovirus (winter vomiting disease) outbreaks in the region's schools. The level of outbreaks reported was in line with seasonal expectations, but within a week the trickle of reports became a torrent.

But the symptoms were not confined to sickness and diarrhoea: parents said their children were also suffering from headaches, lethargy and a flu-like illness. It became apparent that some schools had outbreaks of norovirus, some had influenza B, and some had both.

Many head teachers sought advice from the Agency, which advised them to employ stringent cleaning regimes to eradicate the norovirus. These measures, combined with a reduced teaching staff (due to sickness), meant that many head teachers took the decision to close their schools.

At one point, 20 schools were closed in Birmingham alone. There was huge media attention on the Agency in the West Midlands from national and regional reporters. However, locally, the media provided a vital public health service, announcing school closures and repeating our advice on caring for sick children.

Both diseases spread quickly across most of the region, but as had been hoped, half-term broke the pattern of the diseases and school attendance returned to seasonal expectations.

East of England

First Case of Avian Influenza in the UK

In October, the UK's first case of highly pathogenic (H5N1) avian influenza virus was found in a bird in quarantine in Essex.

The local Health Protection Unit played an important role in handling the potential human health implications of the incident. Staff carried out a risk assessment, identifying people who had been in contact with the bird and assessing the likelihood of their health being endangered.

Although the risk of infection for these individuals was considered low, Agency staff offered them antiviral medication and advised them on signs and symptoms to look out for that might require further investigation.

The Agency also worked to reassure the public that, despite this incident, the risk to the rest of the UK population was still considered to be low. It worked with the media to issue accurate messages to the public, for example, that avian influenza remains largely a disease of birds, and that all the necessary actions were being taken to protect the public.

This episode required a multi-agency response: the Agency worked with the Department for the Environment, Food and Rural Affairs, the local authority and the State Veterinary Service to handle the incident.

London

Sexual Health Report

Sexual health is a key issue for Londoners and the city's health community. Young people in the Capital are at greater risk of poor sexual health than their counterparts across the country, and Londoners bear the highest burden of HIV in England. The biggest rise in HIV in recent years has been seen in heterosexuals; nearly all of these infections have been among Black Africans.

Chapter 7

In light of this, in June 2005, Health Protection Agency London and the London Health Observatory produced a briefing on sexual health in the Capital.

The report, entitled *Choosing health: A briefing on sexual health in London*, highlighted current sexual health issues facing Londoners, and outlined action areas for London's health-related partnerships.

It focused on three key areas: young people and the importance of education for prevention; men who have sex with men and better access to services. The report has been sent to key stakeholders across London to help them in their work.

South West

Scrap Yard Fire in Bournemouth

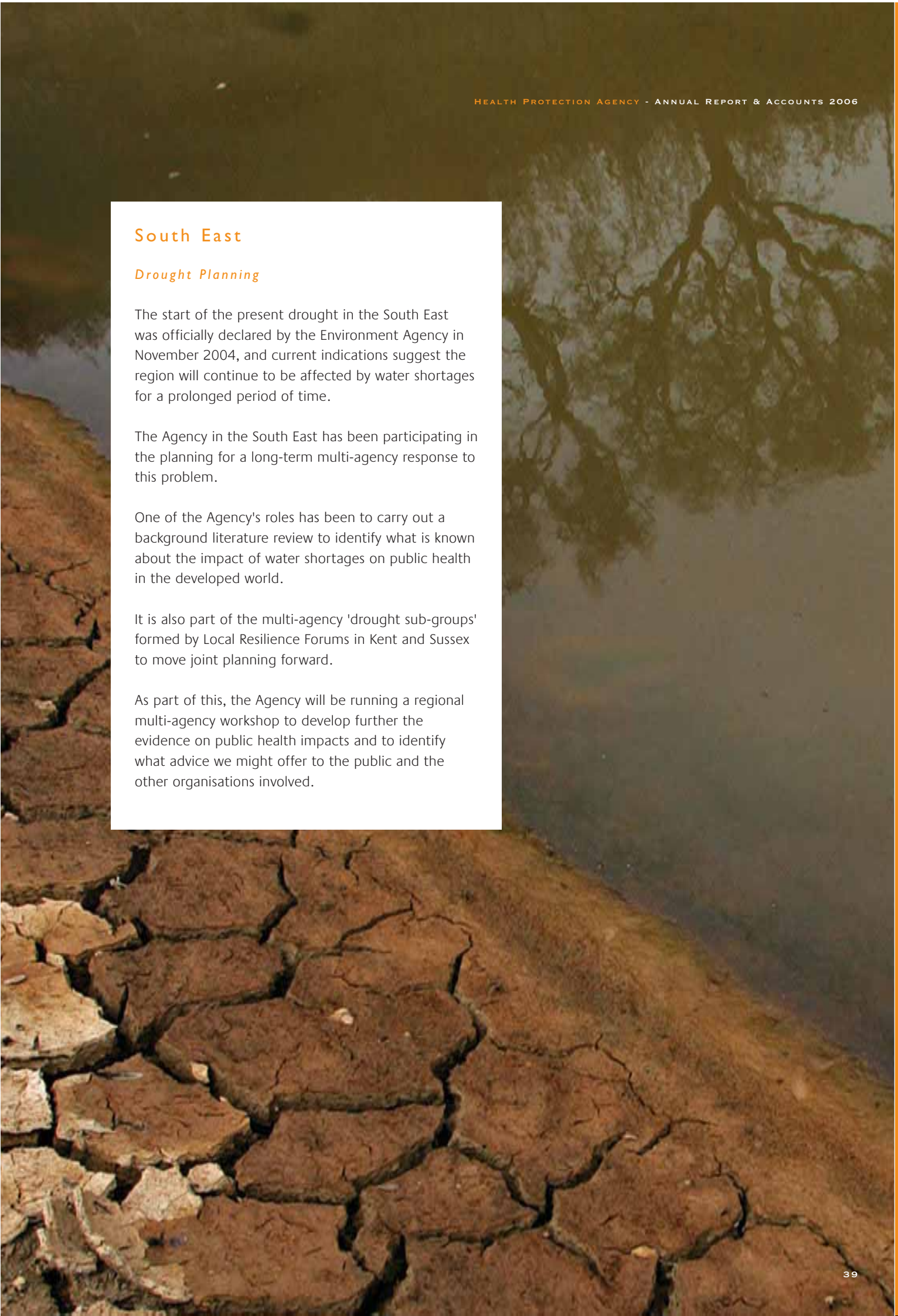
A small fire was reported at a car scrap yard in Bournemouth in November last year. The fire was accompanied by multiple explosions from the cars' petrol tanks; all of which caused a high-energy cable running overhead (which was carrying up to 150,000 volts) to collapse, narrowly missing a row of houses.

The incident caused a massive loss of power: a population of more than 200,000 people had no electricity. In the event, 100 people had to be evacuated because of their proximity to the fire.

Local Health Protection Agency staff formed part of the high level emergency response. They worked with the Chemicals Hazards and Poisons Division to establish any threats the fire might pose to public health. They considered the combined effects of the burning contents of the scrap yard, including the metals, oil and petrol, and the dangers of exploding toxic debris.

They also worked with colleagues in the local authorities and health services to establish an outreach emergency team for the people who had been evacuated. This was in order to supply, for example, medication for those with diabetes.

In addition, Agency staff worked with health colleagues to formulate and issue public health messages via the media. The predominant message was to "go in, stay in, tune in" because important updates for the local population would be given on the radio. Further messages issued included asking people to check on their vulnerable neighbours, and for them to minimise journeys because there were no lights on the road.



South East

Drought Planning

The start of the present drought in the South East was officially declared by the Environment Agency in November 2004, and current indications suggest the region will continue to be affected by water shortages for a prolonged period of time.

The Agency in the South East has been participating in the planning for a long-term multi-agency response to this problem.

One of the Agency's roles has been to carry out a background literature review to identify what is known about the impact of water shortages on public health in the developed world.

It is also part of the multi-agency 'drought sub-groups' formed by Local Resilience Forums in Kent and Sussex to move joint planning forward.

As part of this, the Agency will be running a regional multi-agency workshop to develop further the evidence on public health impacts and to identify what advice we might offer to the public and the other organisations involved.

Chapter 8

Business, Research and Development

The Health Protection Agency uses its research and development expertise to deliver new treatments which benefit public health, working in partnership with the commercial and public sectors. Funding generated by business ventures is ploughed back into the Agency's services and further research into health protection and public health. Some of our achievements in 2005/06 include:

Vaccine Development

Tuberculosis

The Bacille Calmette-Guerin vaccine against tuberculosis, better known as BCG, was developed over 80 years ago, and although effective in protecting young children from TB disease, its protection for adolescents and adults is very variable.

BCG is also not recommended for those who are immuno-compromised, such as people infected with HIV. Therefore, the development of a new vaccine is essential if TB is to be controlled and ultimately eradicated worldwide.

A number of groups from around the world, including the Agency are collaborating in major partnerships on vaccine development for TB. Two main strategies are being pursued: a pre-infection vaccine delivered in childhood, improved from the BCG vaccine; and a post-exposure vaccine that would invoke immunity to clinical disease after infection.

For their part, the European Union has invested €32 million in a project involving 52 research teams from 15 European and African countries. The Agency has a pivotal role because its advanced laboratory capabilities allow pathogenic micro-organisms to be handled under contained conditions. Candidate vaccines, produced by various collaborators, can be tested to determine which confers the greatest immunity, before progression to clinical trials.

In addition, we are researching which genes are important in causing disease under the conditions that the TB bacteria are likely to encounter within the body. This work involves examining which genes are switched on or off and measuring the different proteins that the bacteria manufacture when they cause disease or lie dormant. We hope that this work will contribute to developing new and better vaccines and medicines to treat, or tests to identify this serious disease.

Community-acquired pneumonia

Community-acquired pneumonia (CAP) is a common cause of hospitalisation in the over 50s, and the bacteria *Streptococcus pneumoniae* is probably the most common pathogen causing CAP.

In children the new pneumococcal conjugate vaccine, when introduced as part of the routine childhood immunisation schedule, will offer high levels of protection against invasive pneumococcal disease including some CAP.

Researchers from the Vaccine Evaluation Unit of the Agency, based in Gloucester, are now looking at the question of whether the conjugate vaccine would be effective against CAP in the over 50s age group.

The issue is complicated by the fact that laboratory confirmation is difficult in CAP cases, and patients are treated on a presumptive basis, often after X-ray evidence of illness.

The Unit is working on a study in 2006 to find out how many people with chest infection or pneumonia are admitted to a given hospital in a year and how many of these infections are caused by the pneumococcal bacteria. That in turn will allow the Unit to calculate how much pneumonia could be prevented by the introduction of the pneumococcal conjugate vaccine in adults. The study period runs until the end of March 2007.

Business

Syntaxin

The Health Protection Agency is committed to working with industry wherever this provides opportunities to introduce new public health protection products. In November 2005, we established Syntaxin Ltd. The venture capital firm Abingworth Management Ltd made an initial investment of £3 million into the venture.

Syntaxin Ltd acquired intellectual property from the Agency covering the use of botulinum neurotoxin components to treat a range of chronic diseases; in particular, it was given the rights to build on previous Agency work of re-engineering botulinum toxin into a potent painkiller.

The establishment of Syntaxin Ltd is an important step for the Agency. It means that its cutting-edge research can be developed into products that will deliver direct health benefits to the public.

It is hoped that Syntaxin Ltd will be the forerunner of other such companies involving the Agency.

Variant Creutzfeldt - Jakob Disease (vCJD)

Collaborative work with one of the Agency's commercial partners, Genencor International, led to the development and launch of an idea originally conceived by Health Protection Agency scientists.

The product, trade name Prionzyme™, is an enzyme that can destroy the prion proteins generally agreed to cause variant Creutzfeldt-Jakob disease (vCJD). Currently, prion proteins can survive the conditions used to sterilise surgical instruments, leaving the possibility of some surgical procedures acting as a route of transmission for vCJD.

Laboratory studies showed that Prionzyme™ substantially inactivates prions and it uses a method that could be adopted within hospital sterile service departments.

Chapter 8

Use of Prionzyme™ should also mean that the problem of safe disposal of previously contaminated instruments should be reduced.

The introduction of Prionzyme™, which was launched across the European Union, is an important contribution to efforts already in place to reduce incidents of vCJD infections from surgical procedures.

Drug to fight childhood leukaemia

Staff at the Health Protection Agency worked with a new partner to market a drug to be used in the life-saving treatment of children with leukaemia.

The drug, called Erwinase®, will be used to treat patients who are allergic to current therapies. There is a considerable worldwide clinical demand for this treatment, because as many as 30 per cent of leukaemia patients develop an allergic reaction to current therapies, so the drug provides a much-needed alternative.

Erwinase® is used in the treatment of acute lymphoblastic leukaemia and some non-Hodgkin lymphomas. The Agency is working with OPi Pharmaceuticals who are packaging, marketing and distributing the drug which is manufactured by the Agency.

The funding generated by this venture is ploughed back into Agency services, enabling the Agency to maintain much needed research that benefits public health.

Marketing

The Health Protection Agency is still a relatively new name to many of our potential customers and partners. At the same time, the requirement to win new contracts for the Agency becomes more pressing, and many other organisations are also competing for the time and attention of potential clients. We have therefore undertaken a major sales and marketing effort during the past year, in order to highlight internationally the products and services offered by the Agency.

Marketing materials have been re-designed and re-printed to take account of the growing range of the Agency's services, and the ability to offer clients projects that draw on the expertise of multiple laboratories and that of partner organisations.

In communicating with potential customers, a wide range of media have been employed: web marketing, brochures, trade shows, advertisements, presentations at industry events, newsletters and mail shots. In addition to the conventional marketing channels, professional relationships between our staff and those of partner organisations continue to be key in identifying and developing new opportunities.

Biosecurity

The potential for chemical, radiological, and biological terrorism was one of the threats underlying the formation of the Agency in 2003. Through planning, training, exercises and development of countermeasures, the Agency has strengthened its capacity to deal with this potential threat. This is not something that uniquely affects the United Kingdom however, and cooperation with international partners is therefore key to success.

In particular, the United States and United Kingdom governments and the European Union have put very significant resources into development of new capabilities and countermeasures, giving rise to a number of large competitively-tendered programmes. The Agency has established a successful track record in bidding to carry out or manage these programmes, including work for government bodies, international agencies, and companies which require support in running exercises and in development of vaccines, therapeutic drugs, facilities, and equipment. Particular successes were the running of Exercise Common Ground for the European Union and the siting of new facilities at Centre for Emergency Preparedness and Response (CEPR) by the US National Institute of Allergy and Infectious Diseases.

Training courses in ionising and non-ionising radiation

The safety of any operations involving sources of either ionising or non-ionising radiation depends critically on the knowledge and competence of those managing and performing those operations. The Radiation Protection Division (RPD) of the Agency has a broad portfolio of courses, both scheduled, and tailored to particular operator's needs, which are designed to assist in the achievement of that goal.

Scheduled and customised courses aimed at users of ionising radiation in industry (as well as for dentists, and dental engineers), safety officers, and managers, are provided by the three RPD sites. In particular, a substantial programme of radiation awareness and Radiation Protection Supervisor training has been provided for HM Revenue and Customs as part of programme Cyclamen.

The Radiological Protection Training Scheme delivers training to radiological protection professionals through its scheduled courses.

We provide both scheduled and customised courses on non-ionising radiations, both as awareness courses covering the whole spectrum of non-ionising radiations, and occupational safety training for users of radiofrequency sources, lasers and optical devices (including those used in medical and cosmetic applications). A course on occupational electromagnetic fields (EMFs) is also being prepared to provide an up to-date overview of the Physical Agents (EMFs) Directive.

Demand for emergency response training has continued to grow. Training on behalf of RADSAFE to the emergency services and RADSAFE respondents has continued, and this year radiation-awareness training has been provided to the ambulance service and staff in accident and emergency departments as part of a training programme developed by the Agency on behalf of the Department of Health.

We have also been working with the Local and Regional Services Division to develop a training programme appropriate to the needs of relevant staff in that division.

Members of staff also contribute to courses run by other national providers, as well as to international organisations such as the EC, WHO and International Atomic Energy Authority. Staff also make a major contribution to the MSc course on radiation and environmental protection offered by Surrey University, and to scheduled laser safety courses in association with Loughborough University.

Overall, RPD provided over 230 courses attended by 2,500 delegates.

Chapter 9


© Photographer: Danny Gys/EC

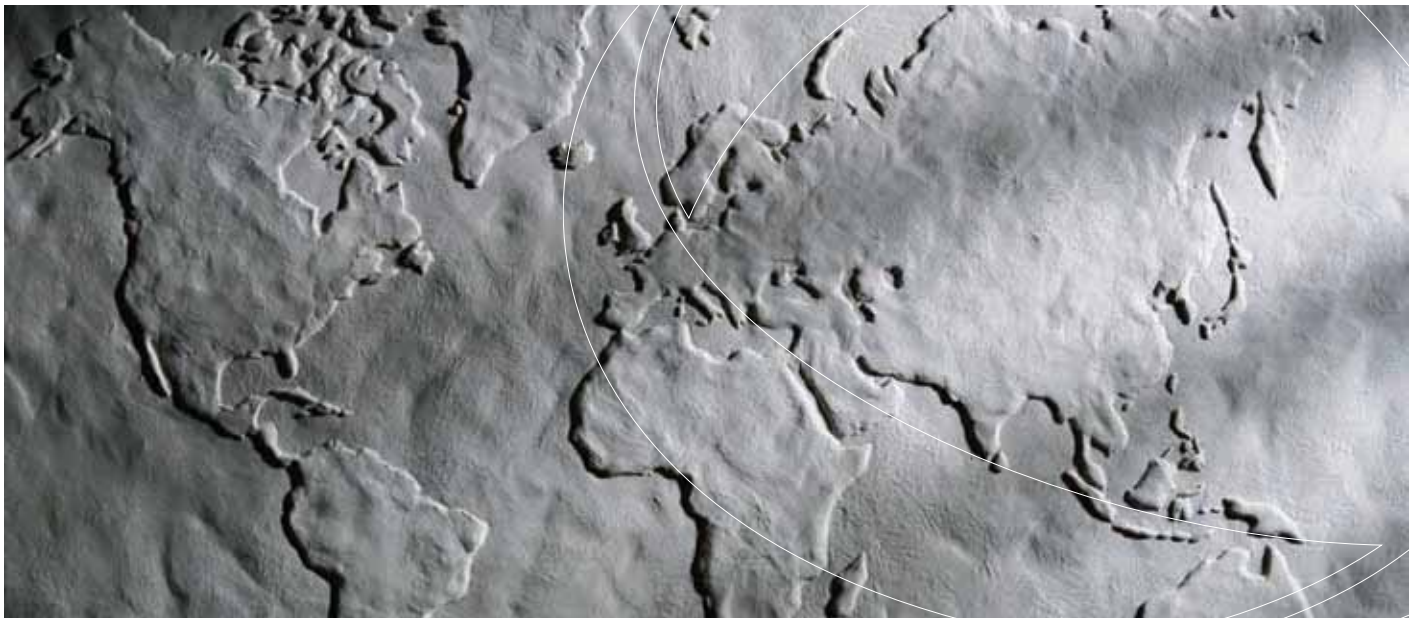
Emergency Planning and Response

International Planning

Exercise Atlantic Blue was an international exercise involving the UK as part of a joint UK/US/Canadian counter-terrorist exercise. It was designed to examine and test individual and collective responses to a complex but credible international scenario across three countries and two time zones. The exercise was a week-long full-scale exercise which focused internationally on three specific areas;

- Public information
- Intelligence and investigation
- Consequence management

Nationally, Exercise Atlantic Blue focused on England's ability to respond to a developing biological threat and on London's management of the crisis and consequence issues surrounding a chemical attack impacting on the City's business district.



The Agency prepared the health scenarios and provided the UK Health Exercise Control for this exercise. The main objectives for the Agency were to:

- Test international/national liaison and communications
- Test the Agency's national contingency plans
- Practise the Strategic Emergency Response Arrangements
- Test the appropriateness of these plans during the immediate action phase, the response phase and early recovery phase of a major chemical, biological, radiological or nuclear (CBRN) incident.

Although, as expected, a number of areas for improvement were identified, the overall consensus was that the exercise was useful and successful. It demonstrated that the Agency could react in a timely and professional manner in such an event and worked well as a team. It was the first time many had played in an exercise of this size and provided valuable experience and underlined the need for the Agency to be involved in an exercise on this scale more frequently.

London Bombings

The lessons identified from exercise Atlantic Blue also helped to consolidate the Agency's response to such a threat, and indeed the London bombings, which occurred some three months later, provided unwelcome circumstances in which to test exactly this capability. On the day itself, the Agency supported those providing clinical care to survivors by issuing immediate advice for clinicians and health professionals on the effect of smoke inhalation. This advice, along with other information and advice that was developed by the Agency over the following days, was published on our website, to which GPs were referred in an alert issued by the Chief Medical Officer.

Although the assessment of the risk of long-term adverse health effects as a result of exposure during the bombings is low, we believe that it is important that any health consequences that do occur are accurately documented. This will not only ensure that those involved can be provided with further health advice as necessary, but provides vital information that can help to protect the well-being of those involved in any future incidents. The Agency therefore initiated a long-term follow-up of individuals exposed to the bombings and the immediate aftermath, working in close collaboration with the NHS, the Emergency Services and Transport for London. Everyone directly exposed to fumes, smoke, blood or blast effects from the explosions in the Capital on 7 July 2005 and anyone helping in the immediate emergency response was asked to join the follow-up.

Chapter 9

Pan-European Exercises

The Agency's Centre for Emergency Preparedness and Response (CEPR) was commissioned by Directorate General Health and Consumer Protection (DG-SANCO) of the European Commission (EC) to design and deliver two Command Post Exercises. These exercises, which took place during the autumn of 2005, were designed to evaluate the abilities, capabilities and functions of the response to a health-related crisis within the European Union (EU).

Exercise New Watchman took place on 19-20 October 2005 and in addition to 25 Member States, the EC, other countries and organisations were invited to take part. Additionally, observers from the newly-formed EU Centre for Disease Prevention and Control (ECDC) were invited to participate along with European Economic Area States (EEA; Norway, Iceland and Liechtenstein), Switzerland, and the World Health Organisation (WHO). The exercise, which depicted a major outbreak of smallpox following a deliberate release, evaluated how Member States and other organisations implemented their infectious disease plans and the effectiveness of communications between them and the EC. It was designed for the health departments of the Member States' governments with an option to include other elements of government response.

Exercise Common Ground, an influenza pandemic exercise, took place on 23-24 November 2005 and involved hundreds of players across the EC, EU agencies such as the ECDC, 25 Member States and the pharmaceutical industry, reacting to a series of fictitious emergency events with a new human influenza strain starting a major pandemic in Europe. It was designed to represent a period of 26 weeks and tested the execution and interaction of national plans and measures, as well as examining the role of the EC. The exercise involved crisis rooms in national health ministries and agencies, linked up through early warning and monitoring systems.

Of Exercise Common Ground, EU Health and Consumer Protection Commissioner Markos Kyprianou said:

"To my knowledge, an exercise on this scale on human influenza pandemic preparedness is unprecedented. The main reason to carry out such an exercise is to learn from experience what works and what doesn't when plans on paper are applied in practice. The exercise report sets out important recommendations for the future and identifies areas of weakness in our pandemic preparedness plans where we need improvements. Work has already begun on addressing these weaknesses, and we will continue to refine, improve and upgrade our preparedness with Member States, the ECDC and our other partners."

Regional and National Exercises

CEPR also runs a series of regional exercises to test emergency preparedness in the health service community, as part of a training programme delivered for the Department of Health. These exercises test and improve the current emergency health plans and help to ensure that health services can respond in a rapid and co-ordinated way to any deliberate release of chemical, biological or nuclear agents (CBRN). Each exercise involves coordinating a wide cross-section of organisations on a national, regional and local level. This includes the Department of Health, other government agencies, NHS organisations, local authorities and other emergency services.

Exercise Hercules was a health-led field training exercise held in Worcester in June 2005. It tested the health services' capability to deliver prophylactic (preventative) treatment to large numbers of the general public who may have been exposed to a biological agent as a result of a deliberate release at a public event. The exercise tested the whole cycle of setting up a mass prophylaxis/treatment centre of sufficient size to treat in excess of 1,000 patients in a normal working day, together with requesting and receiving medical countermeasures from national stocks.

Exercise Ultraviolet was held in March 2006 in the North West region and was the first heat wave exercise to be run by the Agency. The exercise brought together the health community, local authorities and other planning partners involved in dealing with a severe prolonged hot weather event. The aim of the exercise was to improve preparedness and resilience in such an event.

Exercise Argonaut envisaged another severe weather event, this time heavy rain and storms which brought about widespread flooding, both fluvial and tidal, in the whole of the South West region. Held in March 2006, this exercise explored issues around evacuation, re-housing, recovery, the health response, and business continuity within the health service, emergency services and the wider community. Additionally the roles of the local resilience forums and the regional civil contingencies committee were explored.

Influenza Pandemic Exercises

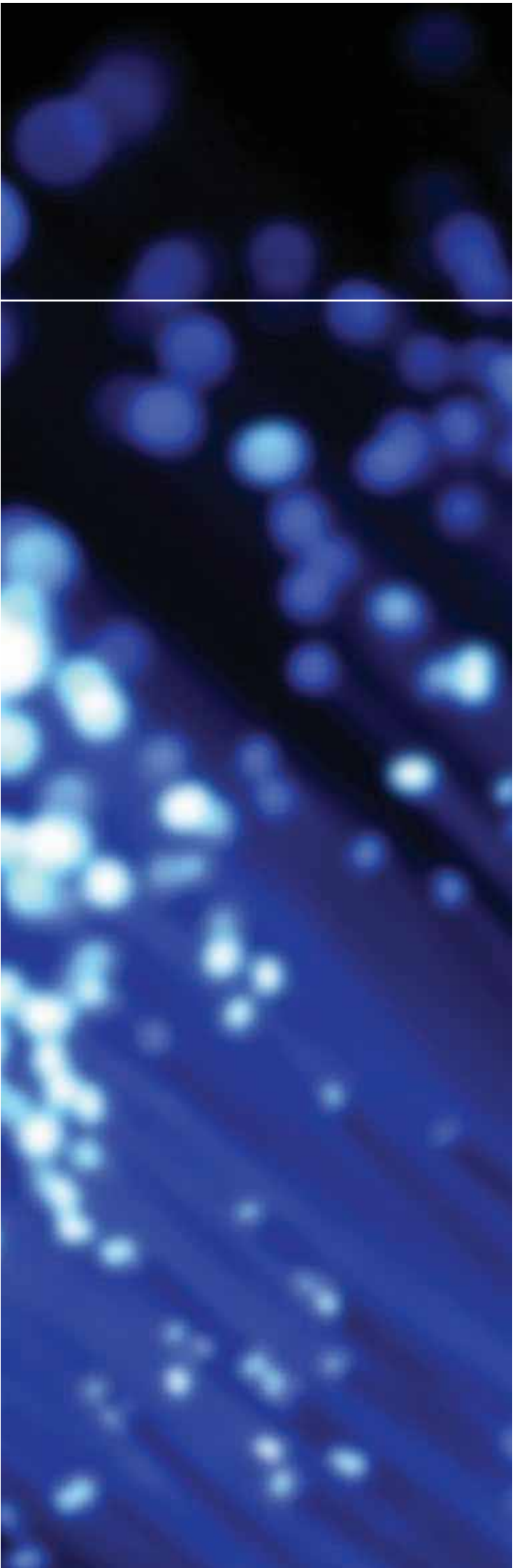
A number of regional exercises studied aspects of preparedness for an influenza pandemic. Exercise Arctic Sea, held in the East Midlands in June, was a health-led multi-agency exercise. It provided an opportunity for health professionals and others to practise and develop, in a multi-agency context, the regional responses during a global influenza pandemic. This exercise enabled players to explore issues around the health response itself and business continuity issues within the health service and the wider community during a protracted rising tide incident.

Exercise Aurora was a day-long multi-agency exercise designed to explore regional responses to a global influenza pandemic lasting a number of months. It took place in Yorkshire in September 2005 and it provided a valuable opportunity to explore the formation of the Regional Civil Contingencies Committee and the Regional Public Health Advisory Team. Exercise New Day was held in Worcester in October 2005, and concentrated on the strategic management issues of an influenza pandemic, focusing on the health sector and the business continuity implications for partner agencies. The exercise enabled the trial of a new 'off the shelf' pandemic influenza exercise.

Governance and Management Commentary 2006

2.1

The Board and the Executive Group



The Board and the Executive Group

The Health Protection Agency is committed to the highest standards of corporate governance and complies with the best practice provisions of the "Code of Good Practice on Corporate Governance in Central Government Departments" issued by HM Treasury. The Board is led by the Chairman, and the executive management of the Agency is led by the Chief Executive. The roles of Chairman and Chief Executive are separate and clearly defined within the division of responsibilities set out in the Health Protection Agency Act 2004.

Role of the Board

The role of the Board is to determine the Agency's long term direction, business objectives and strategy; to ensure that it has adequate resources to meet its objectives and to ensure that it operates an effective risk management system; to monitor its performance and ensure that it acts ethically and meets its responsibilities to stakeholders. Responsibility for delivering the Agency's objectives and running the business on a day-to-day basis lies with the Chief Executive and the Executive Group.

The Board has delegated some of its governance activities to standing Board Committees and Sub-Committees with clearly defined terms of reference set by the Board. The Committees are: the Audit Committee, the Finance Committee, the Human Resources Committee and the Remuneration and Terms of Service Committee. The Sub-Committees oversee: Life Sciences, Local and Regional Services, Radiation, Chemicals and Environmental Hazards.

The Board met on 10 occasions in 2005/06. Minutes and papers of public meetings are published on the Health Protection Agency website at www.hpa.org.uk/board. Non-executive directors meet formally without their executive colleagues twice a year.

2.1

Board Membership

During the financial year under review the membership of the Board comprised; 13 non-executive members (including the Chairman), five Board advisers, the Chief Executive, the Director of Finance and Resources, the Director of the Centre for Infections and the Director of the Centre for Radiation, Chemical and Environmental Hazards. The non-executive members of the Board are drawn from diverse backgrounds, bringing a broad range of views and experiences to Board deliberations.

Board Evaluation

During the year the Board conducted an evaluation of its own performance and that of its committees, including a review of its remit, constitution and operating procedures. This exercise led to actions to improve Board effectiveness and the creation of Sub-Committees to oversee key operational areas. The Corporate Governance Steering Group was replaced in July 2005 by an Integrated Governance Group reporting to the Chief Executive and the Executive Group and overseen by the Audit Committee. The amended Board Committee structure is shown at page 56.

Board Members' Induction and Development

On appointment, members are provided with written terms of appointment, including details of how their performance will be appraised. Members also receive a full induction programme comprising; briefings by top management; a briefing from the Board Secretary on the Board's responsibilities and procedures and visits to Health Protection Agency Centres and Divisions. The Board keeps under review the information it needs to fulfil its responsibilities, and members update their knowledge and develop their understanding of the Agency through site visits, in-depth presentations on topical issues and meetings with key stakeholders. Visits and presentations also give non-executive members the chance to meet executives below Board level. The Board may, if it wishes take independent professional advice and all non-executives have access to the advice and services of the Board Secretary.

Board Appointments

Board members are appointed through a rigorous process of open competition against an agreed specification of the roles and capabilities required. Non-executives are eligible to be considered for reappointment at the end of their term of office, normally every four years.

Board members are required to notify and register with the Board Secretary any issues on which they might have a conflict of interest. Declarations of interest are invited at every Board Meeting and the Board as a whole considers how it should discuss the matter(s) on which the member may have a conflict.

Board Committees

The Audit Committee

The Audit Committee provides support and assurance to the Chief Executive as Accounting Officer and to the Board in its responsibilities relating to issues of risk, control and governance. The Committee met three times a year (until 2005 when the frequency was increased to four times annually). It is chaired by Mr Michael Beaumont*. Other members during the year were Dr Parvaiz Ali†, Dr Barbara Bannister† and Dr Vanessa Mayatt*. In attendance were the Chief Executive, Professor Pat Troop, the Director of Finance & Resources, Dr Tony Sannia, a third member of the Executive Group Dr Roger Cox, the Head of Internal Audit Mrs Helen Morris and representatives from the external auditors, the National Audit Office. The Secretary is Mr Michael Harker. Through its oversight of the Integrated Governance Group (IGG), the Audit Committee reviews governance arrangements across the Agency and identifies the actions necessary to improve governance. The IGG also facilitates compliance with legal, best practice and Board requirements on governance. It reports regularly to the Executive Group and the Audit Committee on governance matters.

The Finance Committee

The Finance Committee reviews and recommends the annual budget to the Board. It reviews performance against the corporate plan, the business plan and the budget, and considers forecasts. Through its Business Development Sub-Committee, it also considers proposals to maximise commercial benefits from the Agency's resources and assets. The Finance Committee is chaired by Mr Ian Cranston*. Other members during the year were Professor Andy Hall* (to January 2006), Professor Karl Nicholson*, Professor Sandy Primrose*, Mr James Brown* (from February 2006), the Chief Executive Professor Pat Troop and the Director of Finance and Resources Dr Tony Sannia. The Secretary is Mr Michael Harker. The Business Development Sub-Committee is chaired by Professor Sandy Primrose*.

* denotes a non-executive member of the Board
† denotes persons who are not formal Board members but attend Board meetings as advisers
‡ denotes an independent external adviser

2.1

The Human Resources Committee

(Formerly the Human Resources and Remuneration Committee until the functions were separated in July 2005). The Human Resources Committee receives reports on items of relevance to the effective management of human resources and promotion of best employment practice in the Agency. It is responsible for providing guidance on these issues and for reporting on them to the Board. The Committee also reviews the overall framework for employment and remuneration of staff throughout the Agency. In 2005/06, the Committee was chaired by Mr Ian Cranston*. Other members during the year were Dr Paul Darragh*, Professor Charles Easmon*, Dr Barbara Bannister† (from March 2006), the Chief Executive, Professor Pat Troop, Dr Mary O'Mahony (to April 2006), Mr John Phipps and Professor Peter Borriello. The Secretary is Mr Stephen Daniel.

The Remuneration and Terms of Service Committee

The Remuneration and Terms of Service Committee was formed in July 2005 to determine the policy for the appointment and remuneration of the executive directors and senior level executive posts directly accountable to the Chief Executive. The Committee also reviews the appraisal process for directors and senior executives. In 2005/06, the Committee was chaired by Sir William Stewart* and other members were Professor Charles Easmon*, Mr Ian Cranston* and Mr Michael Beaumont*. The Chief Executive, Professor Pat Troop and Mr John Phipps attend the meetings. The Secretary is Mr Michael Harker.

Board Sub-Committees

The Life Sciences Sub-Committee

The Life Sciences Sub-Committee is responsible for considering life sciences issues which require careful and specialist in-depth analysis, and making recommendations to the Board on such strategic matters. The Sub-Committee is chaired by Professor Andy Hall*; other members during 2005/06 were Dr Barbara Bannister†, Professor Peter Borriello, Dr Natasha Crowcroft, Dr David Dance, Professor Geoff Garnett‡, Dr Roger Gilmour, Dr Tony Howard‡, Dr Angela Iversen, Professor Harold Jaffe‡, Dr Philip Minor‡, Mr Allen Roberts, Professor Jenny Roberts‡ and Professor Robin Weiss‡. The secretary is Mrs Frances Knight.

The Radiation, Chemical and Environmental Hazards Sub-Committeee

The Radiation, Chemical and Environmental Hazards Sub-Committee, formed in the spring of 2005, is chaired by Professor William Gelletly†. It is responsible for considering issues pertaining to the chemical, radiation and environmental hazards which require careful and specialist in-depth analysis, and making recommendations to the Board on such strategic matters. Members of the Committee are Dr Parvaiz Ali†, Professor Peter Blain‡, Professor Alan Boobis‡, Professor Gary Coleman, Dr Roger Cox, Professor Sarah Darby‡, Dr Paul Darragh*, Professor Paul Elliot‡, Professor Alan Lehman‡, Professor Malcolm Mason, Dr Jill Meara and Dr John Stather. Secretariat support is provided by Dr John Cooper and Dr Elaine Farmery. The following organisations have observer status at this Committee: Department of Health (Dr Hilary Walker), Scottish Executive (Dr Arthur Johnston), Northern Ireland, the Department of Health, Social Services and Public Safety (Dr Ken Ledgerwood), Food Standards Agency (Dr Lynne Ridler-Wall), National Assembly for Wales (Dr Owen Crawley), Health & Safety Executive (Mr Giles Denham) and the Environment Agency (Dr David Copplestone).

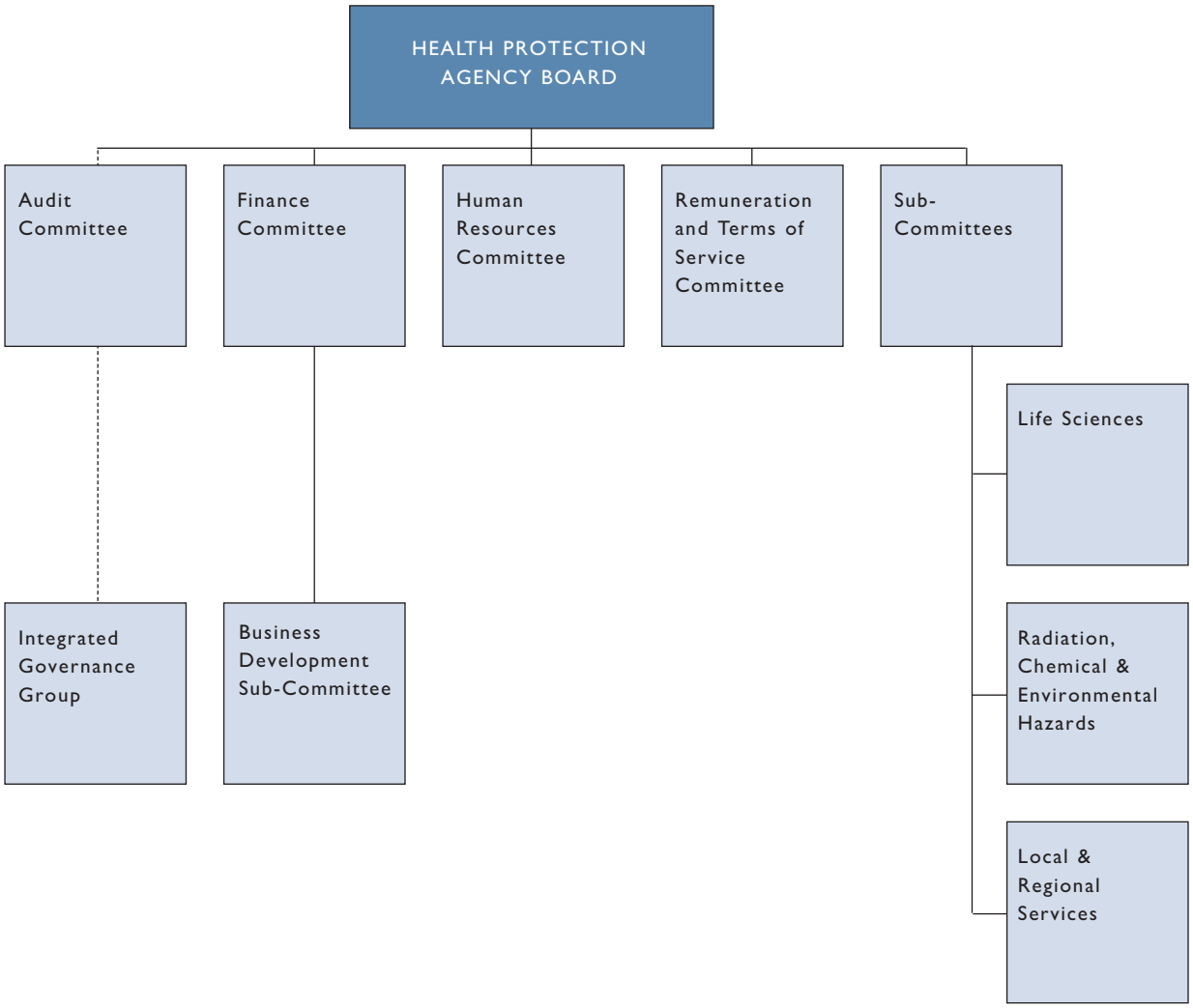
The Local and Regional Services Sub-Committee

Chaired by Professor Charles Easmon*, the Sub-Committee comprises Health Protection Agency Board members, Health Protection Agency staff and external experts. The formation of the Local and Regional Services (LARS) Sub-Committee in July 2005 followed the report to the Board of the time-limited *ad hoc* Local and Regional Services Group which preceded it. Some of those who served on this earlier Group are members of the Sub-Committee.
The Sub-Committee maintains a strategic overview and scrutiny of the Agency's local and regional work and its working relationships with those, both inside and outside the Health Protection Agency, with whom it has to work to deliver its services. It aims to provide critical support and oversee its development, to maximise its unique contribution to the Agency, and to work closely with the other Sub-Committees of the Board. It briefs the Board through regular reports, and reviews the key risks which might prevent LARS from achieving its objectives. The members of the committee for 2005/06 were Mr Michael Beaumont*, Mrs Valerie Bevan, Dr Paul Cosford‡, Professor Lindsey Davies†, Mr. Tim Everett‡, Professor Stephen Gillespie‡, Mrs Jan Hutchinson‡, Dr Sue Ibbotson, Dr Mary O'Mahony, Professor Stephen Palmer, Dr Mike Painter‡, Professor Julius Weinberg‡, Dr Robert Wilson‡ and Professor Richard Wise†. The secretary is Mr Peter Hammond.

* denotes a non-executive member of the Board
† denotes persons who are not formal Board members but attend Board meetings as advisers
‡ denotes an independent external adviser

2.1

Board Committee Structure




RADON CHAMBER

2.1

Members of the Health Protection Agency Board

The persons who served on the Board from 1 April 2005 are listed below, biographies are available on our website http://www.hpa.org.uk/hpa/about_us/board_mem.htm

Non Executive Members

Sir William Stewart PhD, DSc, FRS, FRSE (Chairman), DSc (Hon), D Univ. (Hon), LLD (Hon), FFPH (Hon) **Chairman**
Professor Charles Easmon CBE, MD, PhD, MRCP, FRCPath, FMedSci **Deputy Chairman**
Dr Parvaiz Ali† MSc, PhD, CSC, MIPEM, FInstLM
Dr Barbara Bannister† MB, BS, MSc, FRCP
Michael Beaumont CBE, FCA
James T Brown (from October 2005)
Ian Cranston FCA
Dr Paul Darragh TD, MD, PhD, MSc, FRCP(UK);FRCP1, FFPHM(UK), FFPHM(I)
Professor William Gelletly† OBE, PhD, CPhys, FInstP (from April 2005)
Professor Rod Griffiths† CBE (from April 2005)
Professor Andrew Hall MB, BS, MSc, PhD, FRCP, FFPH
Professor David Latchman MA, PhD, DSc, FRCPath, FRSA
Dr Vanessa Mayatt BSc, PhD, DipOHS, FRSH, CFIOSH
Professor Karl Nicholson MD, FRCPath, FRCP
John Wyn Owen CB (from February 2006)
Professor Sandy Primrose PhD
Dr Geoffrey Schild CBE, PhD, DSc, FRCPath, FRCP, F.Med.Sci
Professor Richard Wise† FMedSci, MD, FRCPath, FRCP

Executive Members

Professor Pat Troop CBE, FFPH, FRCP, Chief Executive
Professor Peter Borriello PhD, FRCPATH, FFPH, Director of Centre for Infections
Dr Roger Cox FMed Sci, Director of Centre for Radiation, Chemical and Environmental Hazards (from April 2005)
Dr Tony Sannia PhD, FCA, Director of Finance and Resources.

Secretary
Michael Harker

No changes to the Board membership have occurred since 31 March 2006.

† denotes persons who are not formal Board members but attend Board meetings as advisers

The Executive Group

The Health Protection Agency Executive Group consists of executive directors and is chaired by the Chief Executive, Professor Pat Troop. It is responsible for the operational management of the organisation and for implementing the policies and strategies agreed by the Board. The Chief Executive is also the Accounting Officer for the Agency, and has responsibility to Government for the management of the organisation. The Executive Group meets monthly. Members who served on the Executive Group since 1 April 2005 are listed below:

Professor Pat Troop CBE, FFPH, FRCP, Chief Executive
Lis Birrane MCIPR, Director of Communications
Professor Peter Borriello PhD, FRCPATH, FFPH, Director of Centre for Infections
Dr Roger Cox FMed Sci, Director of Centre for Radiation, Chemical and Environmental Hazards
Dr Roger Gilmour PhD, FIFST, Director of Centre for Emergency Preparedness and Response
Michael Harker IHSM, Director of Corporate Affairs and Secretary to the Board
Dr Mary O'Mahony MRCPI, FFPH, was Director of Local and Regional Services until she retired in April 2006
John Phipps Director of Human Resources
Dr Tony Sannia PhD, FCA, Director of Finance and Resources
Professor Stephen Palmer MA, FRCP, FFPH, Director of Local and Regional Services (acting from April 2006 and substantive from June 2006)
Dr Tim Wreghitt MA, PhD, FRCPath, Acting Director Microbiology Network (from May 2006)

2.2

The Remuneration Report

Remuneration and Terms of Service Committee

An overview of all matters relating to the remuneration of all staff and more detailed consideration of the remuneration of the members of the Executive Group is performed by the Agency's Remuneration and Terms of Service Committee. The Committee membership comprises four non-executive Board members, chaired by Sir William Stewart (Board Chairman). The Committee was established in July 2005. Prior to July 2005, the functions were conducted by the Human Resources and Remuneration Committee. The members of the Committee are:

Sir William Stewart (Chairman)

Professor Charles Easmon

Ian Cranston

Michael Beaumont

Since its formation in July 2005, the Committee has been responsible for making recommendations to the Board, within agreed terms of reference, on the Agency's framework of staff and executive remuneration and on overall remuneration packages for those senior executives directly accountable to the Chief Executive.

The Remuneration and Terms of Service Committee is advised by the Director of Human Resources. The Committee is also able to call upon external advice, when it chooses to do so.

The Remuneration Report has been prepared in consultation with the Remuneration and Terms of Service Committee, following the provisions in the Government's Financial Reporting Manual.

2.2

Remuneration Policy

Non-executive Board members

Non-executive Board members, including the Chairman, are appointed by the Secretary of State for Health or by the Ministers of the Devolved Administrations, as advised by the Independent Appointments Commission, for a defined term, normally four years. They are appointed through a rigorous process of open competition against an agreed specification of the roles and capabilities required. Non-executive Board members are eligible to be considered for reappointment at the end of their term of office.

The Secretary of State for Health or the Ministers of the Devolved Administrations determine the remuneration of the non-executive board members, which they review annually.

In addition to receiving the fees for their normal Board duties and responsibilities, non-executive Board members are entitled to receive daily allowances for carrying out work outside and additional to those normal Board duties and responsibilities. This work is classified into four areas: chairing recruitment panels for medical appointments; serving as panel members for final stage grievance and disciplinary hearings; specially commissioned consultancy work; and serving or acting as an observer on the Board (or similar) of other organisations as a representative of the Agency where no payment is received for this from the other organisation.

Non-executive Board member remuneration is not pensionable.

In addition to the non-executive Board members appointed by the Secretary of State for Health or the Ministers of the Devolved Administrations, a number of advisers attend the Agency's Board meetings. These advisers receive the same remuneration as the non-executive Board members.

The remuneration of non-executive Board members is not performance related, but performance is assessed by the Chairman of the Board through an annual appraisal process.

Members of the Executive Group

The Health Protection Agency's remuneration package for members of the Executive Group consists of an all inclusive salary, and pension provisions. In determining the remuneration of members of the Executive Group, the Remuneration Committee has regard to:

- Pay and employment policies elsewhere in the Agency, especially when determining annual salary increases;
- The Principles of Good Governance relating to senior executives remuneration appropriate to the Agency;
- The need to recruit, retain and motivate suitably able and qualified people to exercise their different responsibilities;
- Regional/local variations in labour markets and their effects on recruitment and retention.

The salaries of the members of the Executive Group are reviewed annually, in line with guidance from the Department of Health and changes to terms and conditions of employment in the NHS. The increase in basic salary from 2004/05 to 2005/06 of 3.225 per cent was in line with the increase for all employees throughout the Agency. In 2005/06, Dr Roger Cox received an additional increase which related to his wider role and responsibilities within the Health Protection Agency following the merger with the National Radiological Protection Board on 1 April 2005.

There are no performance related bonuses payable to members of the Executive Group; however their performance is assessed by the Chief Executive in consultation with the Chairman of the Board through the Agency's annual appraisal procedure.

The members of the Executive Group (with the exception of Dr Cox) are members of the NHS Pension Scheme. Dr Cox transferred to the Health Protection Agency from the National Radiological Protection Board on 1 April 2005 and retained his membership of the United Kingdom Atomic Energy Authority combined Pension Scheme that offers very similar benefits to the NHS Scheme. Details of the pension schemes, including the benefits payable, are included in the notes to the financial statements. The members of the Executive Group hold employment contracts which are open-ended until they reach the normal retirement age of 65. Early termination, other than for misconduct, would result in the individual receiving compensation in accordance with NHS Whitley terms and conditions and, in the case of Dr Roger Cox, in accordance with the terms of the United Kingdom Atomic Energy Authority Combined Pension Scheme.

2.2

Remuneration of the Non-executive Board Members

The total emoluments of the Chairman of the Board, Sir William Stewart, for the year ended 31 March 2006 amount to £60,000. In 2005 the Chairman received a combined total of £52,222, which comprised of £36,802 in respect of his Chairmanship of the Health Protection Agency and £15,420 in respect of his Chairmanship of the National Radiological Protection Board. All other non-executive board members received emoluments of £5,673 (2005: £5,535) in respect of their Board responsibilities. Non-executive members who served for part of the year received the relevant proportion of this sum.

In addition to their basic Board remuneration, the following non-executive Board members received the following amounts in respect of daily allowances for carrying out a number of specific duties additional to their normal Board duties and responsibilities:

	2006 £	2005 £
Dr Parvaiz Ali	-	271
Michael Beaumont	271	542
Ian Cranston	2,745	1,084
Professor Charles Easmon	271	-
Dr Vanessa Mayatt	4,663	4,336
Dr Sandy Primrose	813	678
Dr Geoffrey Schild	278	813
Professor Richard Wise	834	771

No other benefits were received by any non-executive Board member.

Remuneration of the Members of the Executive Group

The salary and allowances for the full year of the members of staff who served on the Executive Group during the year ended 31 March 2006, classified into bands of £5,000, were as follows:

	Salary £'000	Other Remuneration £'000	Total 2006 £'000	Total 2005 £'000
Professor Pat Troop[1]	170-175	-	170-175	165-170
Ms Lis Birrane	70-75	-	70-75	70-75
Professor Peter Borriello[1]	135-140	-	135-140	130-135
Dr Roger Cox[1]	125-130	-	125-130	85-90
Dr Roger Gilmour	145-150	5-10	150-155	145-150
Michael Harker	100-105	5-10	105-110	105-110
Dr Mary O'Mahony	155-160	-	155-160	155-160
John Phipps	100-105	0-5	105-110	100-105
Dr Tony Sannia[1]	110-115	-	110-115	105-110

[1] Denotes persons who are currently members of the Health Protection Agency Board.

The remuneration of Professor Pat Troop and Dr Mary O'Mahony includes clinical excellence awards funded by the Department of Health.

Dr Roger Cox, formerly Director of the National Radiological Protection Board served as a full member of the Executive Group for the two years to 31 March 2006. However, no costs were incurred by the Health Protection Agency in relation to the year ended 31 March 2005 and the total shown for that year relates to the costs incurred by the National Radiological Protection Board.

The other remuneration relates wholly to relocation expenses. No benefits in kind were received by any member of the Executive Group and no amounts were payable to third parties for services of any member of the Executive Group. During the year no awards or compensation payments have been made to former members of the Executive Group.

2.2

Pension Entitlements of Members of the Executive Group

The pensions entitlements of the members of the Executive Group are as follows:

	Real Annual Increase in Accrued Pension (bands of £2,500) **£'000**	**Real Annual Increase in Lump Sum** (bands of £2,500) **£'000**	**Accrued Pension as at 31 March 2006** (bands of £2,500) **£'000**	**Lump Sum Value as at 31 March 2006** (bands of £2,500) **£'000**	**Cash Equivalent Transfer Value as at 31 March 2005** (bands of £1,000) **£'000**	**Real Annual Increase in Cash Equivalent Transfer Value** (bands of £1,000) **£'000**
Professor Pat Troop	0.0-2.5	0.0-2.5	70.0-72.5	212.5-215.0	1,234-1,235	16-17
Ms Lis Birrane	0.0-2.5	2.5-5.0	0.0-2.5	5.0-7.5	19-20	9-10
Professor Peter Borriello	0.0-2.5	2.5-5.0	32.5-35.0	100.0-102.5	460-461	25-26
Dr Roger Cox	7.5-10.0	22.5-25.0	40.0-42.5	122.5-125.0	566-567	113-114
Dr Roger Gilmour	0.0-2.5	2.5-5.0	10.0-12.5	35.0-37.5	-	-
Michael Harker	0.0-2.5	0.0-2.5	45.0-47.5	137.5-140.0	720-721	17-18
Dr Mary O'Mahony	0.0-2.5	7.5-10.0	62.5-65.0	187.5-190.0	994-995	36-37
John Phipps	0.0-2.5	2.5-5.0	15.0-17.5	45.0-47.5	-	-
Dr Tony Sannia	0.0-2.5	2.5-5.0	12.5-15.0	42.5-45.0	197-198	18-19

The Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a scheme member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the NHS Pension Scheme (or in the case of Dr Cox, to the United Kingdom Atomic Energy Authority Combined Pension Scheme). They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

The real increase in the value of the CETV reflects the increase in CETV effectively funded by the employer. It takes account of the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

PROFESSOR PAT TROOP CBE
CHIEF EXECUTIVE
30 JUNE 2006

2.3

The Management Commentary

About the Health Protection Agency

Our Role

On 1 April 2005, the Health Protection Agency Special Health Authority and the National Radiological Protection Board merged to become the Health Protection Agency as an Executive Non-Departmental Public Body; an independent specialist organisation dedicated to protecting the health of the population of the United Kingdom. We do this by providing impartial advice and authoritative information on health protection issues to the public, to professionals and to government. Everything we do is based on expert skills and knowledge applied to strong front-line services. We work at international, national, regional and local levels to identify new threats to health, to prepare for them, prevent them where possible, and should they arrive reduce their impact on public health. We combine public health and scientific expertise, research, and emergency planning within one organisation.

We provide an integrated approach to protecting UK public health through the provision of support and advice to the NHS, local authorities, emergency services, other Arms Length Bodies, the Department of Health and the Devolved Administrations.

2.3

Our role includes:

- Providing impartial expert advice on health protection and providing specialist health protection services
- Identifying and responding to health hazards and emergencies caused by infectious disease, hazardous chemicals, poisons or radiation
- Anticipating and preparing for emerging or future threats
- Supporting and advising other organisations with a health protection role
- Improving knowledge about health protection through research and development, education and training.

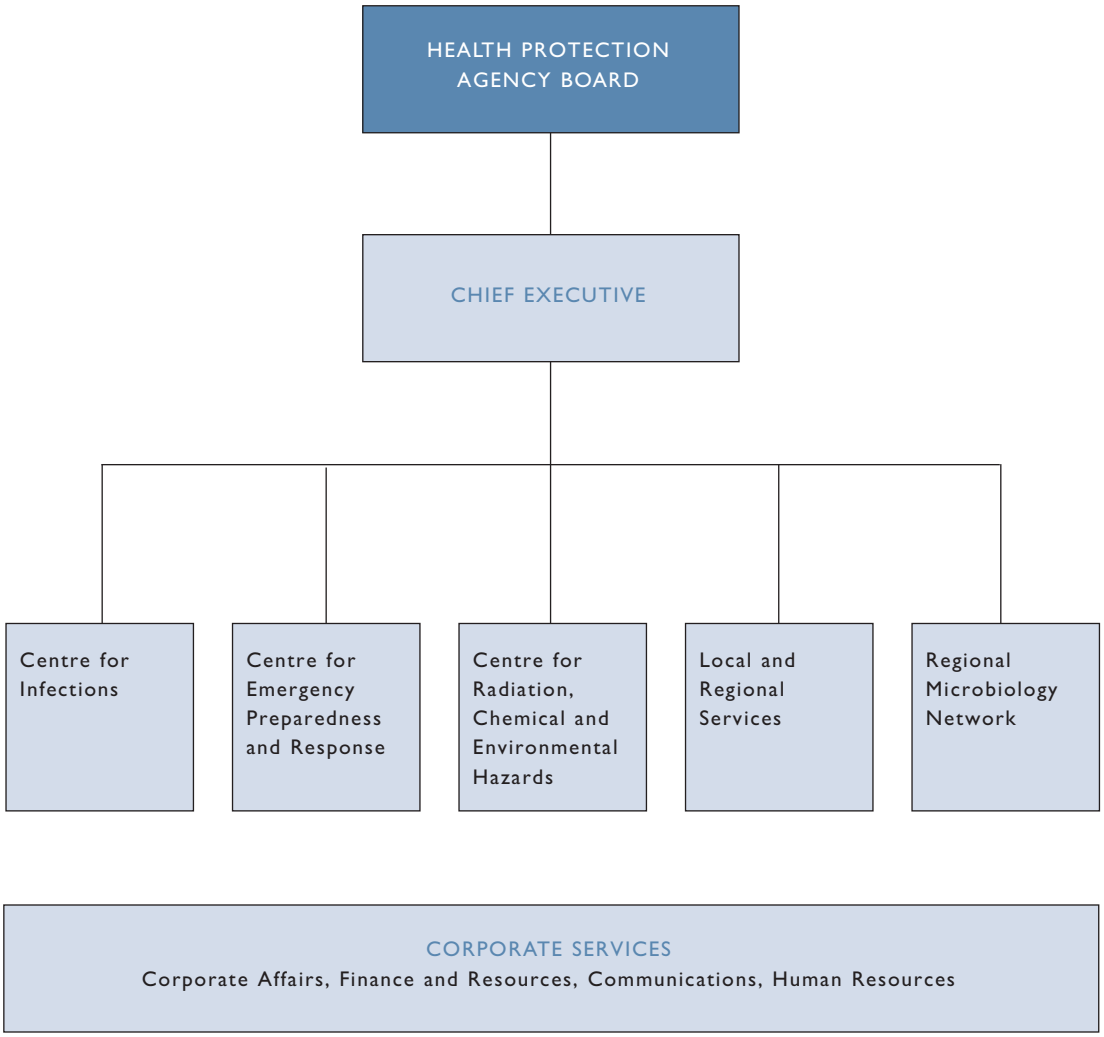
Staff

During 2005/06 the Agency employed 3,217 staff. They are based in three centres (Colindale, north London; Chilton, Oxfordshire and Porton Down, Wiltshire) and in locations across England, Wales, Scotland and Northern Ireland. The Agency's headquarters are based in London.

Agency staff include doctors and nurses, scientific and technical staff from many specialist disciplines, administrative staff and emergency planners. They work with colleagues in corporate affairs, finance and resources, communications and human resources divisions.

Medical	260
Nursing	180
Professional & Administrative	847
Scientific	590
Technical	1135
Agency	205
Overall Total	3217

Organisational Structure



2.3

Centre for Infections

The Centre for Infections, based at Colindale, north London, is responsible for a number of essential frontline national services including;

- Infectious disease surveillance
- Providing specialist and reference microbiology and microbial epidemiology
- Co-ordinating the investigation of national and cross-regional outbreaks
- Helping advise government on the risks posed by various infections and responding to international health alerts.

It monitors unusual disease outbreak activity, and carries out typing and fingerprinting of infectious agents. This is done by working closely with partner organisations in the UK such as the Veterinary Laboratories Agency for infections transmitted from animals, and international bodies such as the World Health Organisation and the new European Communicable Disease Centre as well as other parts of the Health Protection Agency.

At the local level, the Centre provides expert support to colleagues in Local and Regional Services and the Regional Microbiology Network as well as directly supporting customers. Expert staff are on-call 24-hours a day for normal business and to ensure an immediate response to national emergencies. The Centre also provides commercial services, expert disease modelling, quality assurance schemes, training, and has an active research programme.

Centre for Emergency Preparedness and Response

The Centre for Emergency Preparedness and Response manages the Agency's Centre at Porton Down, Wiltshire. The Centre co-ordinates emergency preparedness across the Agency and it works closely with the NHS, local authorities and the emergency services, identifying and strengthening countermeasures. Exercises to test responses are conducted across the country with UK and EU partners, further improving emergency planning and preparedness. A major training programme is conducted for health professionals in chemical, biological, radiological and nuclear scenarios and casualty management.

The Centre models disease, particularly for agents considered a bioterrorism threat. It has high containment laboratories for diagnosis of imported dangerous pathogens like Ebola or agents which could be used in a deliberate release. It conducts research on vaccines and diseases such as tuberculosis and meningitis, and on prions. Anthrax vaccine is manufactured for the UK Government and defence vaccine research is carried out for the UK and US Governments.

Centre for Radiation, Chemical and Environmental Hazards

The Centre for Radiation, Chemical and Environmental Hazards is based in Chilton, Oxfordshire, with a number of offices and laboratories in Birmingham, Cardiff, Leeds, London, Glasgow and Newcastle serving regional needs. The Centre has two divisions; radiation protection and chemical hazards and poisons. They cover a diverse range of issues associated with the risks to public health resulting from exposure to noxious chemicals and poisons, and to ionising/non-ionising radiations.

Key functions include: advice, research and the provision of service; the assessment of exposures and the consequent risks to health; advising government, other bodies and the public on these risks; providing an input to emergency preparedness and response; providing training and other commercial services and working in partnership on health protection issues with other national and international bodies. The Centre also provides advice and support within the Agency, particularly to staff in Local and Regional Services who, with primary care trusts, respond to local incidents and public concerns.

The Centre provides advice to UK Government Departments and Agencies on the impact to human health from chemicals in water, soil and waste as well as information and support to the NHS and health professionals on toxicology. The Centre is undertaking intensive research to improve our understanding of long-term consequences of low level, chronic exposure to chemicals and poisons especially in relation to reproductive health, asthma and cancers.

Guidance is available round-the-clock from medical toxicologists, clinical pharmacologists, environmental scientists, epidemiologists and other specialists. The Centre also advises doctors and nurses on the best way to manage patients who have been poisoned. It provides this service through the National Poisons Information Service.

2.3

Local and Regional Services

Local and Regional Services (LARS) has responsibility for working with key stakeholders at local and regional levels to provide specialist health protection advice and operational support directly to all primary care trusts, strategic health authorities, regional directors of public health and all local authorities in England. Support to Northern Ireland is also provided and there is a close working relationship with many other government agencies in England. LARS works to ensure health protection security and to reduce the burden of disease. It does this by responding to and controlling some 2,500-3,000 infection and environmental incidents and outbreaks each year, assisting in tackling infections such as MRSA, tuberculosis and sexually transmitted infections. LARS also actively engages in the Agency's preparedness and response to emergencies, from flooding to the deliberate release of biological and/or chemical agents. It is heavily involved in developing training both internally and externally, aiming to improve practice, overall capacity and leadership in health protection.

Local and Regional Services are provided through nine Regional Offices (which correspond to the Government Offices of the Regions). There are 30 Health Protection Units (HPUs), each covering an area with a population of about 2 million. Each unit has a director, consultants, nurses and other staff with specialist health protection skills. They have access to expert advice from the other centres and divisions in the Agency.

The task of each HPU is to work directly with NHS primary care trusts (PCTs), acute hospital trusts and local authorities in their area and agree with them how health protection should be delivered locally. Functions include local disease surveillance, laboratory services, alert systems, investigation and management of the full range of health protection incidents and outbreaks, and ensuring local delivery and monitoring of national action plans for infectious diseases.

Regional Microbiology Network

The Regional Microbiology Network incorporates all the Agency's Regional Microbiology Laboratories, Food, Water & Environmental Laboratories and Collaborating Laboratories. These laboratories provide frontline microbiology services and support outbreak investigations. The Regional Microbiology Network has extensive links with the Centre for Infections, Centre for Emergency Preparedness and Response and the National Institute for Biological Standards and Control (NIBSC) to facilitate the co-ordination of microbiology services within the Agency.

Corporate Services

The three Centres, LARS and the Regional Microbiology Network are supported by four divisions within corporate services:

Finance and Resources

The Finance and Resources Division includes the departments of Finance, Estates and Facilities, Information Systems, Information and Knowledge Management, the International Office and Internal Audit. The Division provides the Agency with efficient, effective and economic financial and resource management services to enable the Agency to achieve its strategic goals.

The first two years of the Agency's existence involved harmonising and standardising basic systems. During 2005/06 the Division implemented a new financial management system across the organisation, which will provide more accurate information and cost savings and upgraded the IT infrastructure to improve communications across the Agency.

Corporate Affairs

The Corporate Affairs Division supports the Board and the Executive on secretariat matters and takes the corporate lead in a number of Agency activities, including business planning and risk management, governance, health and safety, quality and environmental policy, security, legislation and non-commercial legal issues. The division also manages the Agency's complaints procedure, subject access requests under the Data Protection Act and requests under the Freedom of Information Act. The Expert Advisory Support Office also provides scientific secretariat services to a number of Department of Health Advisory Committees.

Communications

Press office teams provide a nationwide round-the clock service to the Agency, its stakeholders and the media, ensuring that advice and information is timely, authoritative, consistent, accurate and clear. The Communications Division deals with hundreds of press enquires each month leading to between 500 – 800 mentions in the print media and facilitates an average of 100 - 150 broadcast and print interviews each month.

Specialists in publications, design, branding, stakeholder engagement, public involvement and internal communications provide comprehensive support for the Agency's work at all levels, from local and regional to national and international. The Division strives to ensure that the Agency's communications activities, whether advice, information, publications or stakeholder communications, fully support, enhance and take forward its strategic goals and priorities and contribute to their successful delivery.

Human Resources

The Human Resources Division provides operational support for all parts of the Agency. The Division has led the implementation of the Agenda for Change programme with the welcome and widespread support of trade union colleagues. The Division has also conducted an Employee Opinion Survey across the Agency which resulted in a good response rate, and valuably highlighted a number of areas for improvement. The plans for remedial action are in place and will be implemented in partnership with all interested parties.

2.3

Additional Corporate Information

Human Resources Policies and Process Development

The Agency continues to develop a wide range of policies and processes in partnership with staff representatives, designed to improve the employment experience of Agency staff and to assist the organisation in meeting its objectives.

Recent initiatives include development of policies to improve the work life balance of employees, for example flexible working and flexi-time policies. The Agency has also placed an increased emphasis on employee development through the introduction of a new appraisal process supported by a comprehensive employee development and support policy.

Employee relations - We promote positive employment relations with staff and their representatives and a Recognition and Procedure Agreement has been entered into with the relevant trade unions. The bi-monthly meetings of the National Joint Staff Committee, which is made up of management and staff-side representatives, provide a valuable mechanism for on-going constructive consultation on the Agency's wide range of issues and developments.

Communications with employees - The Agency is committed to regular informed communications with its employees at all levels. This is carried out by the human resources and the communication divisions using a variety of means, both formal and informal. This aims to ensure the regular and clear communications of information that may impact upon employees' working and professional lives.

Equality and diversity - The Agency undertakes to promote equality and diversity and not to discriminate between employees or job applicants in respect of age, sex, sexual orientation, marital status, race, colour, ethnic or national origin, disability, religion, gender reassignment, HIV status or trade union membership.

The Agency has established a working group to look at all Equality and Diversity issues within the organisation. The group was established initially to look at Race Equality issues as the organisation is bound under the Race Relations (Amendment) Act 2000 although its remit has recently expanded to look at all equality and diversity issues.

The group is currently working on a number of issues including an audit of Human Resources and non-Human Resources policies, a leaflet to be given to all existing and new staff, equality and diversity training, an equality statement to go on job descriptions, a report on recruitment issues and the sourcing of equality information on staff for monitoring purposes.

Persons with disabilities - The Agency's policy in respect of people with disabilities is incorporated into its Equality and Diversity Policy. The Agency takes all practicable steps to ensure that it meets the requirements of the Disability Discrimination Act 1995. Relevant principles and practices are incorporated into training programmes for staff involved in recruitment and selection procedures.

Health and Safety

The Health Protection Agency complies with all relevant legislation and regulations concerning Health and Safety at Work.

Good progress has been made with the Corporate Health and Safety Plan this year and Division and Centre action plans have also been developed. Regular review and updates of these plans will ensure that compliance is maintained and that continuous improvements are made.

Numerous corporate Health and Safety policies have been developed and launched this year as part of our programme of introducing a more consistent approach to Health and Safety across the Agency. These policies have been communicated to all staff via line management and are also available on a new Health and Safety intranet site, also launched this year.

Our comprehensive programmes of audits, inspections, risk assessments and training has continued this year, as has the Agency's commitment to ensuring that safe and healthy working conditions continue to be provided for employees and contract staff, and for visitors.

Environmental Management and Sustainability

As a Non-Departmental Public Body, the Agency acknowledges and fully supports the UK Government's commitment to sustainable development. As a major part of this, the Agency has developed a programme to ensure that it delivers on the commitments made in its Corporate Environmental Policy. A strategy has been developed which will ensure that appropriate environmental management systems are implemented, key performance indicators are established and through these, continual environmental performance improvement is achieved.

The Environmental Strategy Group continues to lead on this process on behalf of the Executive and Board. The strategy includes appropriate environmental initiatives and a prioritised implementation plan for developing and improving our performance in several key areas such as procurement, energy and water use, waste management, travel and the estate and social impacts.

There has been progress in many areas this year, for example:

- We have been working with the Department for Environment Food and Rural Affairs (DEFRA) and will be contributing to the pan-government fund established to offset carbon dioxide emissions from air travel. These contributions will commence based on the air travel undertaken in the 2006/07 financial year.

- We have invested significantly in electronic communication facilities, which will facilitate better communications and emergency operational support. However, it is also envisaged that this investment will allow a reduction in business travel and hence environmental emissions.

- We engaged the Carbon Trust to complete energy usage reviews at our three main sites this year. Where reasonable and practicable, actions are now being taken to address the recommendations made in these reports.

2.3

We have introduced a Green Transport Policy at our Centre for Emergency Preparedness and Response and will be looking to extend this principle to our other main sites wherever possible.

During the year ahead we will be making more improvements in several key areas, our aims include:

- To introduce an Agency energy policy. This will outline our approach to achieving better utilisation of natural resources. As part of this initiative, we will also be pursuing a single contract to purchase 'green' electricity.

- To continue the development of our sustainability policies, the Executive will also be considering the development of a more formal Sustainable Development Action Plan for publication during the year.

- To achieve better communications on environmental activities, both internal and external, to engage with staff and stakeholders on what we are already doing and what can still be done. We will be launching a new Environmental Intranet site, through which staff can participate in the environmental activities and initiatives that will be launched during the year. Another focus will be the provision of information to our staff to raise awareness of how their actions affect the environment, hence improving environmental performance.

Research and Development

The Agency uses research and development expertise to underpin its authoritative evidence based advice and, working in partnership with the commercial and public sectors, to deliver new treatments which benefit public health. During the year the Agency published *Providing the Evidence Base for Public Health; The Health Protection Agency's Research Strategy 2005-10* which outlined the main functions and unique research and development capabilities of the Agency and a framework to guide the Agency and partner organisations on productive areas for research and development.

Business

A significant proportion of the Agency's income comes from commercial activities including microbiological, chemical and radiological testing, research and development contracts, custom biopharmaceutical manufacture, consultancy and training, as well as products including diagnostic kits and therapeutic medicines.

Performance Indicators

The Agency has developed a number of key corporate performance indicators (KPIs) and, using the established programmatic approach to health protection priorities, will further develop KPIs to reflect the health outcomes of the Agency's work.
These developments will be conducted in hand with the Department of Health's 'balanced scorecard' initiative to be introduced in 2006/07.

Information Access Requests

During 2005/06 the Agency received 126* information access requests, including requests transferred to the Agency from other public authorities.

Most requestors cited the Freedom of Information Act but the figure also includes requests handled in part or exclusively under other information access legislation. Specifically, four requests were handled under the Environmental Information Regulations and seven were subject access requests for personal information (made by the data subject or agents acting on their behalf) and were handled under the Data Protection Act.
In addition three requests were made under the Re-use of Public Sector Information EU Directive.

Parliamentary Questions

A total of 197 Parliamentary Questions (PQs) were referred to the Agency during 2005/06. Most were referred by the Department of Health, and a few by the Food Standards Agency. In 2005, PQs were also referred by the Department for Environment, Food and Rural Affairs and HM Treasury.

PQ topics for this period include tuberculosis, Hepatitis, HIV and AIDS, sexually transmitted infections, chemicals, gastrointestinal infections, infections in patients and staff in hospitals and care homes, and antimicrobial resistance.

Six requests concerning radiation matters were dealt with separately by the Centre for Radiation Chemical and Environmental Hazards. They included the possible health effects of mobile phones or masts, UV exposure and the national chemical biological network alerting system.

Complaints

Thirteen complaints were received from members of the public, patients and service users during the year and were handled in accordance with the Agency's Complaints Procedure (http://www.hpa.org.uk/hpa/foi/PDFs/complaints_procedure.pdf).
Of three complaints outstanding from the previous year, one was resolved, one was referred to the Information Commission and one remains outstanding.

*Additional information requests from an individual on the same subject were counted as part of the original request. There were six such requests in 2005-06.

2.3

Stakeholder Relations

The Agency has mapped out its key stakeholders (Page 81) and senior managers have been identified as the lead contact for each of these. One of the responsibilities of this group will be a review of the health of these stakeholder relationships. This is being completed in 2006/07 together with the establishment of a more formal framework to monitor and develop relationships with key stakeholders

Despite the lack of a formal framework most relationships have been managed well with much work already invested in them and these continue to grow and develop. A good example of this is the strengthening links with the Environment Agency which includes a formal Memorandum of Understanding, a joint five year action plan and co-operation at a local level in response to chemical spills and waste management. Other relationships such as those with both national and local press and media are by nature much less formal.

GOVERNMENT DEPARTMENTS
Dept Health
Defra
DfID
Food Standards Agency
Cabinet Office
FCO
Home Office
HM Treasury
DTI
DFT
MOD
DfES
ODPM (until 5 May 06) Department for Communities and Local Government.

GOVERNMENT AGENCIES
Environment Agency
Health and Safety Executive
National Institute for Biological Standards and Control
Veterinary Laboratory Agency
Security Services
Prison Service
Medicines & Healthcare Products Regulatory Agency
National Patient Safety Agency
National Institute for Clinical Excellence

OTHER PUBLIC SECTOR
Local authorities
Government Offices in the Regions
Police Service
Fire Service
National Audit Office

INTERNATIONAL
Governments
WHO Central and Regional
Counterpart organisations e.g. Health Canada, CDC, CHP Hong Kong)
Regional Government Bodies and their Health sectors
EC DG Sanco, others
Other European Agencies e.g. EFSA
Other UN bodies (UNAIDS, UNICEF)
Other health organisations e.g. OIE
Other organisations, e.g. NATO
Int. Commission on Non-Ionising Radiation Protection
Int. Commission on Radiological Protection
Global Health Security Action Group
International Committees
ROI (joint working with NI)

DEVOLVED ADMINISTRATIONS/COUNTERPART BODIES
National Assembly for Wales
Scottish Executive
Northern Ireland

Health Protection Scotland
NPHS for Wales

Republic of Ireland – 5 nations group

HEALTH SERVICE BODIES
Primary Care Trusts
Strategic Health Authorities
Acute Trusts
Regional Directors of Public Health
GPs
NHS Direct
Public Health Observatories
Other health professionals (Infectious disease, A&E etc)
National Blood Service
NHS Hubs (e.g. Trust TECH)
Post-graduate deaneries

NOT FOR PROFIT SECTOR
Charities
Voluntary Organisations
Non-Governmental Organisations

ACADEMIA/PROFESSIONAL
Universities, colleges, schools
Professional institutions
Professional (craft) groups
Training bodies
Professional societies

PARLIAMENT
MPs
House of Lords
Parliamentary Committees
MEPs

PUBLIC
Press and media
Individuals

PRIVATE SECTOR
Companies
Manufacturers
Trade associations

EMPLOYEE GROUPS
Trades Unions
NHS Confederation

TYPES OF RELATIONSHIP
Regulatory, Statutory, MOUs/SLAs, Informal, Formal, Individual, Corporate, Common Interest, Contractual, Legal, Professional network, collaborative R&D

2.3

Operating Review

Overview 2005-06

The past year has been very productive against a challenging background. Within the Agency we carry out a huge volume of work that goes on day to day, responding to many thousands of enquiries and requests for information and advice, responding to incidents and supporting our many stakeholders with a range of services such as training, specialist diagnosis and production. This report illustrates many of these activities, showing the breadth of our work, in terms of the type of activity, the range of health protection issues, the number of stakeholders, and the nature of the problem, ranging from concern from individuals and local communities, to national and sometimes international problems. All are important, as directly or indirectly they each affect the public and individuals, who should always remain at the forefront of our purpose.

However, in this report, we also demonstrate how we are turning more to a 'programme approach.' The intention is that we focus on high priority health protection issues. Such priorities are informed by the burden of disease, the concern of the public, and government priorities. We aim to harness our resources across the Agency towards a common goal, focusing more on outputs and outcomes and so gain benefit from the organisation being greater than a 'sum of its parts'.

One of our important responsibilities is to respond to emergencies, supporting others when they are in the lead role and helping other organisations, particularly the NHS, in their preparedness. This year we delivered a significant programme of work on pandemic influenza preparedness and supported the response to major incidents such as the bombings in London on 7 July and the Buncefield fire, and we are breaking new ground in establishing a standard methodology for longer term follow up. This will remain a high priority for us.

Our profile has increased steadily through the year with around 200,000 visits and over a million hits per month on our website, 500 – 800 references to the Agency in the media each month, with an average of 100 – 150 broadcasts mainly in the Regions. We are frequently asked to present at major conferences and are contacted for advice by an increasing number of organisations and government departments, such as the recent request from a government department on the effects of arsenic and nickel in soil. As an organisation, our international profile continues to grow, for example through the two exercises we ran across the European Union.

Internally, our moves to develop an organisation more fit for purpose continue. In 2004/05, we moved to more integrated Centres. In 2005-06, we have concentrated more on how we work as an organisation. A Framework for Organisational Development is now incorporated into our Strategic Plan; '*Strengthening the Front Line*' provided a new approach to the development of local services and we started on a process called 'The Intelligent Health Protection Agency ', which provides a way of working, and a tool for assessing that work. We have embarked on a series of reviews to create more efficient and effective working, including a new and financial system.

Our external income has grown over recent years, which makes an important contribution to public health, as not all our work is funded by government. It also contributes to our overheads, and enables us to retain high quality staff for public health purposes. Some of this funding is for research. This is essential if we are to be at the forefront as a health protection organisation, basing our work on the latest evidence and being at the 'cutting edge' of technology. The establishment of Syntaxin Ltd is an important step for the Agency. It means that this cutting-edge research can be developed into products that will deliver direct health benefits to the public.

There is of course much more to do. Despite a major programme, for example in information technology and accommodation, we must continue to improve our infrastructure. We must complete Agenda for Change and the push forward with the Knowledge and Skills Framework and our workforce development programme. We will continue to improve internal communications and staff involvement, so that staff recognise the value of the work that they and others carry out and feel proud of the many achievements by so many people across the Agency.

Although the programme approach and more effective working across different parts are beginning to bear fruit, we must continue to drive towards outcomes, and we have an ambitious programme of work as set out in the Strategic Plan. Our day to day service must be delivered with constantly improving quality and efficiency, and we must be prepared to respond to any emergency no matter where in the country. We will need to ensure that our stakeholders are content with the services and support we provide, and reach out more to the public and involve them more in our work.

We have many highly professional and competent employees and we are confident that they will continue to rise to this challenge.

Individual Programmes

Programme 1	*Reducing the incidence and consequences of infection* *Healthcare-associated Infections and Antimicrobial Resistance* *Hepatitis* *Sexual Health* *Vaccines* *Tuberculosis* *Influenza* *Gastrointestinal Diseases*
Programme 2	*To protect against the adverse health effects of acute and chronic exposure to chemicals, poisons and other environmental hazards*
Programme 3	*To improve protection against the adverse effects of exposure to ionising and non-ionising radiation*
Programme 4&6	*To prepare and respond to emerging health threats and emergencies including those posed by deliberate release*
Programme 5	*To protect and improve the health of children*
Programme 7	*To strengthen information and communications systems for identifying and tracking diseases and exposures to infectious chemical and radiological hazards*
Programme 8	*To build and improve the evidence base through a comprehensive programme of research and development*
Programme 9	*Develop a skilled and motivated workforce*
Programme 10	*To manage knowledge and share expertise*
Programme 11	*To build on and develop the intellectual assets of the organisation in partnership with industry and other customers, in order to better protect the public*
Programme 12	*To raise the understanding of health protection and involvement of the public and ensure they have access to authoritative, impartial and timely information and advice*
Programme 13	*To strengthen health protection at local and regional levels*
Programme 14	*To contribute to UK international health objectives and to global health*
Programme 15	*Making it Happen - building the infrastructure to support effective operational functions*

The Health Protection Agency delivers its strategic goals through 15 programmes. This ensures a co-ordinated way of working across the Agency, and provides a critical assessment of whether the Agency is using its resources to best effect to achieve its aims and objectives.

Each programme is overseen by a director, who is a member of the Executive Group. The director is supported by a programme manager who co-ordinates the work. Members of each programme are drawn from across the organisation.

Programme I

Reducing the incidence and consequences of infection

Healthcare-associated Infections and Antimicrobial Resistance

The Agency continued its active surveillance and feedback to the Department of Health, Strategic Health Authorities and the NHS on healthcare-associated infections (HCAI) such as MRSA, *Clostridium difficile*, and surgical site infections. It also published monthly bacteraemia reports from voluntary surveillance on the Agency's website.

The Agency strengthened MRSA monitoring by developing and introducing the MRSA enhanced surveillance system, implemented in October 2005. It also developed statistical process control charts to assist Trusts in monitoring their MRSA rates against targets.

Centre for Infections staff developed a template for "Drug-Bug" alert systems for identifying unusual or emerging antibiotic resistance patterns.

HCAI regional leads worked with the NHS to identify and spread good practice by establishing and co-ordinating HCAI networks. The Agency also coordinated, on behalf of the Department of Health, the HCAI Steering Group, which made recommendations to the Chief Medical Officer on areas for further action at the end of its first phase of work in summer 2005.

The Agency assisted with an investigation into the outbreaks of *C. difficile* at a number of NHS hospitals. It also produced an interim report with the Healthcare Commission on the results of a national survey of *C. difficile* in December 2005.

The Agency produced guidance on issues including the use of Health Protection Agency MRSA typing services, and the control of multi-resistant *Acinetobacter baumannii*. It also produced two reports on antimicrobial resistance and published the evaluation of IT systems for infection control. It contributed to the revised UK guidelines on MRSA.

Further developments to the MRSA surveillance system are underway, including enhancements to cover bacteraemias in renal units, an area for development this coming year. The first joint report with the Veterinary Medicines Department on antimicrobial resistance in both human and animal pathogens will be published.

Hepatitis

The first Health Protection Agency Annual Report on hepatitis C was published in December 2005. It showed that, based on Health Protection Agency modelling, the burden of severe liver disease due to hepatitis C infection is predicted to rise.

During the year the programme board supported the development of a set of standards for the routine surveillance and control of hepatitis B and C mainly from a local perspective.

The Agency was involved in the investigation of three incidents of hepatitis B in nursing homes (involving over 12 cases and three deaths), linked to the inappropriate use of diabetic blood testing devices. This led to the issuing of an alert by the Medicines and Healthcare Products Regulatory Agency.

Sixteen laboratories were recruited to establish enhanced surveillance of hepatitis C testing. They are monitoring the impact of the national awareness campaigns on the amount of testing conducted to inform healthcare planning for the treatment and diagnosis of infection.

The Agency published the results of vaccine coverage for several components of the selective vaccination programme (genito-urinary medicine clinics, prisons and in infants born to infected mothers). Improvements were seen in coverage in most programmes, most notably among injecting drug users. The Agency's modelling suggests that this has the potential to substantially reduce cases of hepatitis B in England.

Projects being undertaken for the coming year include implementing and auditing the hepatitis B and C standards in local Health Protection Units, taking action to improve routine laboratory reporting of hepatitis A and B, and planning work to support the introduction and widening of indications for treatment of chronic hepatitis B and C.

Sexual Health

The sexual health programme board oversees a range of projects concerned with issues about the surveillance and epidemiology of sexually transmitted infections (STIs).

The Agency conducts quarterly audits of genito-urinary medicine (GUM) clinic waiting times on behalf of the Department of Health and in collaboration with the British Association for Sexual Health and HIV (BASHH). The audit aims to establish whether patients are offered an appointment within 48 hours of contacting the service as recommended in the Public Health White Paper 'Choosing Health' (2004).

In October 2005, Agency staff presented a report assessing HIV test uptake nationally. Uptake of HIV testing has exceeded the 60 per cent that the 'Sexual Health Strategy' specified should be achieved by the end of 2007.

The Agency took over the operational management of the National Chlamydia Screening Programme (NCSP) in November 2005. The roll out of the programme continues and national coverage will be complete by March 2007.

The *lymphogranuloma venereum* (LGV) outbreak has continued unabated, reaching 327 cases by the end of December 2005. A senior scientist was appointed at the Centre for Infections to help co-ordinate enhanced surveillance of LGV and syphilis.

The programme board continues to support emerging surveillance issues raised by BASHH and other professional bodies. These include developing methodologies for the surveillance of STIs in clinical settings outside GUM. Current projects include participating in the development of the Common Dataset for Sexual Health (Department of Health) and the calculation of STI rates by area of residence (BASHH/Health Protection Agency Information Group).

Vaccines

To maximise uptake within the national immunisation programmes the vaccine programme board established a nationwide network of Health Protection Unit immunisation leads to provide local leadership and communication for enhanced implementation of policy and the sharing of good practice.

The Agency began a study to evaluate the schedules for meningococcal C and pneumococcal vaccines in infants. The Agency is also monitoring the uptake and effectiveness of the adult pneumococcal immunisation programme.

Work continued on the *Neisseria lactamica* candidate vaccine against meningococcal disease, and a research proposal for options for use of the new Human Papillomavirus vaccine was submitted to the Department of Health.

The Pneumococcus and Haemophilus Forum was established to support surveillance of these infections and develop public health guidance. The Meningococcus Forum reviewed and revised extensive public health guidance on the management of meningococcal disease.

An Agency advisory and reference service for the Varicella Zoster (the virus causing chicken pox) immunisation programme was launched, including serological testing and polymerase chain reaction.

The programme board assisted with the multi-agency outbreak team on the national mumps outbreak, issuing advice on priorities for MMR vaccine usage. The outbreak, which caused over 50,000 cases of mumps in 2005, with many universities and schools affected, declined significantly in 2006.

Tuberculosis

The aim of the tuberculosis programme is to contribute to the elimination of tuberculosis in England through support to the Department of Health and NHS in the key areas identified in the Chief Medical Officer's National Action Plan.

Achievements in the year included the assessment of the effectiveness of diagnosis of TB by molecular analysis of sputum and saliva, and a review of the role of gamma interferon tests in the diagnosis of latent infection.

Proposals were developed to strengthen local and national tuberculosis surveillance systems so as to provide the most relevant and timely information for those providing services.

The Agency also contributed to the World TB Day annual event to raise the profile of the public health problem posed by tuberculosis, and established a TB Newsletter.

Staff developed a molecular strain typing strategy which will contribute to improved local control of tuberculosis as well as better understanding of disease transmission at local and national level. In particular, this will help to identify early outbreaks.

An interim report on trends in the occurrence of tuberculosis in England, to be used as a baseline for future assessment of interventions, was prepared with a final report planned for the end of 2006.

Other future work includes overseeing the development of a revised national surveillance system, the finalisation of Revised Standard Operating Procedures for the laboratory diagnosis of TB, and the development and evaluation of molecular methods for rapid detection of resistance genes.

Future work of the Agency will be required to focus on ways to support measures to reduce transmission of infection in this country and reduce the risk that previously infected individuals develop disease.

Influenza

The priorities of the influenza programme board have been to deliver on the requirements of the Agency set out in the joint UK Health Department Pandemic Influenza Plan released in October 2005.

To ensure the establishment of robust nationwide arrangements for dealing with the human health aspects of avian influenza, the programme board worked closely with the Department for Environment Food and Rural Affairs (DEFRA), the Department of Health (DH) and other partners at a national, regional and local level. The output from this collaboration has been the development and cascade of Avian Influenza Specific Clinical and Laboratory Algorithms and Standard Operating Procedures for frontline health staff within the Agency and in the wider healthcare delivery setting.

The programme board oversaw the roll out of H5 laboratory testing capability to all Regional Health Protection Agency Laboratories with validated Proficiency Panel testing arrangements in place.

It developed evidence-based Pandemic Influenza related guidelines for infection control and clinical treatment, in conjunction with DH and appropriate professional bodies, including the British Thoracic Society.

It developed population-based modelling outputs to inform the strategic public health decision making required to mitigate the impact of an influenza pandemic.

There were ongoing collaborative research and development projects, including the development of candidate vaccines for influenza viruses with pandemic potential.

There was a review of existing influenza surveillance mechanisms in terms of their population coverage and potential development of daily reporting capability, in the event of a pandemic.

The planning and implementation of an ongoing Agency-led exercise programme continued to test various aspects of pandemic influenza-related preparedness and response arrangements at international, national, regional and local levels.

Ensuring that there is local, timely access to oseltamivir for deployment by frontline Health Protection Units in the event of an avian influenza incident was secured through liaison with DH and the NHS.

The programme board's focus for the coming year is to secure robust, consistent frontline preparedness arrangements for pandemic and avian influenza.

Gastrointestinal Diseases

Staff conducted a follow up of the Infectious Intestinal Diseases Study which took place about 10 years ago, and used new molecular methods developed by the Agency to test 4,500 stored faecal samples for infections such as rotavirus, norovirus, and cryptosporidium. The results of the research, which was funded by the Food Standards Agency (FSA), mean that a cause of illness has been identified in 80 per cent of cases.

The programme continued with its three-year enhanced sentinel surveillance of salmonella and campylobacter which began in November 2004 and which is investigating the risk factors for disease transmission. So far it has involved almost 30,000 samples and 20,000 patient questionnaires.

Following on from the Agency's work providing assistance and advice on the *Salmonella* Enteritidis outbreak associated with Spanish eggs, staff developed enhanced investigation protocols for the surveillance of future outbreaks. The protocols are used to monitor the effectiveness of measures taken by the FSA and European agencies to reduce the burden of disease associated with imported eggs.

In addition, the Agency produced algorithms for diagnosis, investigation and management of vero toxigenic *E. coli* (VTEC) and salmonella. It has also worked to improve the timeliness and completeness of laboratory reporting of gastrointestinal infections by diagnostic and reference laboratories. It also continues collaborative work with partners such as the Drinking Water Inspectorate, and is producing a book on the management of food poisoning outbreaks with the FSA.


RADON CHAMBER

Programme 2

To protect against the adverse health effects of acute and chronic exposure to chemicals, poisons and other environmental hazards

The Agency, and in particular the Chemical Hazards and Poisons Division, provided significant strategic and scientific support during the Buncefield incident and the London bombings, and provided support in the management of other chemical incidents.

Three major reviews were completed. The first was on the effects of landfill sites on reproductive health. The other two were toxicology reviews covering current knowledge on reproductive toxicity and the neurotoxicity of environmental chemicals.

The detailed review of the National Poisons Information Service (NPIS) in 2004 led to a number of improvements to the service, including the implementation of a new rota for consultants and NPIS information scientists. These changes have increased joint working and have been evaluated successfully in the year by partners and clients.

Significant progress took place in the development of a matrix for risk prioritisation of chemicals and groups of chemicals and an associated user guide for health professionals. This matrix will lead to the development of integrated planning and preparedness for chemical incidents across the G7 countries as well as the European Union and the UK.

A mechanism for the routine surveillance of key health-related indicators and disease endpoints at a local level was developed and will be applied in one region as a pilot. It will investigate the utility of cancer registries, hospital admissions and registries of congenital anomalies in surveillance. The findings will be used to establish whether certain diseases are connected with environmental hazards.

In 2005/06, the Agency signed a Memorandum of Understanding with the Environment Agency and is in the process of signing agreements with other organisations. These will lead to improvements in the management of chemical incidents and research and development initiatives.

Work for 2006/07 will focus on four areas: to develop further the NPIS; to strengthen the links between the Agency and key stakeholders; to contribute to the EU-wide Action Plan for the improvement of children's health as part of the Children's Environmental Health Action Plan for Europe and to develop protocols for the Agency's actions in areas of significant public concern.

The Agency is also launching the Newcastle Toxicology Research Unit, a joint initiative with the University of Newcastle upon Tyne. The Unit will develop novel biomarkers of exposure to environmental chemicals and focus on mechanistic toxicology.

Programme 3

To improve protection against the adverse effects of exposure to ionising and non-ionising radiation

The Radiation Protection Division (RPD) provided formal scientific advice throughout the UK on the health effects of ionising and non-ionising radiations, underpinned and supported by its laboratory research and development, epidemiological studies, exposure assessments and computer modelling.

It also provided advice to the public, across the Agency and to local organisations with responsibilities for public health. Work in this area was enhanced in 2005/06 by the formation of a medical exposures department.

The Division recently took on responsibility for advising government departments on the health effects of ultrasound and infrasound; it set up an expert advisory group to review the existing knowledge.

In the work on non-ionising radiation, emphasis is placed on the health effects of public exposures to power frequency electromagnetic fields and radiofrequency radiations where there is significant public concern and scientific uncertainties.

Over the year, RPD ran a broad range of training courses on radiological protection. Many of these updated the staff of external bodies on technical and scientific developments.

RPD continued to have a significant role in emergency planning for radiological emergencies, and planned and took part in many radiological emergency exercises.

Commercial services provided in radiation protection included the personal monitoring of occupational exposures, commercial radiological protection advice, environmental monitoring, radiochemistry, instrument testing and a specialised service that covers dental radiology. Financial surpluses from these services were used to support core scientific work in radiation protection.

RPD will respond to the forthcoming draft Recommendations of the International Commission on Radiological Protection (ICRP) and initiate consultation with stakeholders in order to provide advice on implementation in the UK.

In 2005/06 there was a corporate target concerned with development of work across the two divisions of the Centre for Radiation, Chemical and Environmental Hazards (CRCE). This was achieved and has led to another two targets for 2006/07, including secondment of staff between Chemical Hazards and Poisons Division and RPD departments.

Programme 4 & 6

To prepare and respond to emerging health threats and emergencies including those posed by deliberate release

Programme 4 (To protect against new and emerging diseases and health threats) and programme 6 (To improve preparedness of responses to health protection emergencies including those caused by deliberate release) were merged in April 2005.

At this time, the National Radiological Protection Board joined the Agency. The integration of emergency plans and arrangements continued through the period culminating in the integrated participation of the Agency in a major civil nuclear emergency exercise. Participation included local radiation specialists, communications and the strategic Agency response.

Over the year, the Agency was busy establishing a limited emergency response vaccine capability within existing facilities and developing a strategy for the rapid manufacture of vaccines in collaboration with other organisations.

It provided ongoing support to the Chief Medical Officer's National Expert Panel on New and Emerging Infections, which brings together experts from different fields to assess the risks of new diseases.

It continued with its short and medium/long-term horizon scanning to identify potential threats to public health from emerging infections.

The Agency continued to work with key organisations and partners in industry to identify risks and implement responses to minimise the incidence and impact of variant Creutzfeldt - Jakob disease (vCJD). A capacity for screening the tonsils in the national anonymous tonsil archive for the presence of abnormal prion protein is being prepared at the Centre for Infections.

Testing will begin as soon as a suitable high throughput test system becomes available. The Agency and its industrial partner continue to develop the novel prion decontamination technology, "Prionzyme", which has now received essential CE mark approval.

The Agency ran two exercises for the European Commission, and ran eight multi-agency exercises in the UK covering a range of public health threats. It also provided training for frontline staff. Over 1,300 NHS staff completed the A&E radiation monitoring training and ambulance personnel dosimeter training.

The development of the Agency's National Emergency Response Plan is ongoing and was tested during the London bombings and the Buncefield fire. Lessons and appropriate action following incidents and from the exercise programme were identified and will be used to develop further emergency preparedness and response arrangements.

The Agency continues to develop its Emergency Operations Centres with one major project completed and others planned to ensure an integrated Agency response to emerging health threats and emergencies. It will also develop emergency preparedness standards for internal use. This will promote consistent and integrated arrangements as well as providing a common basis for monitoring and measuring performance in this area.

Programme 5

To protect and improve the health of children

The Health Protection Agency, together with the Environment Agency, is leading on the development of a UK Children's Environment and Health Action Plan (CEHAP). In order to develop this plan a scoping study was commissioned to identify and review current activities relating to the WHO (Euro) Children's Environment and Health Action Plan for Europe (CEHAPE) and EU environment and health initiatives. This study is continuing into 2006/07 and a workshop to discuss these findings is to be held during 2006.

An integral part of developing the CEHAP is to involve young people and ensure their views are taken into consideration, activities so far have included:

- Active participation in UK Youth Parliament workshop on young people's environment and health concerns.

- Involvement in WHO (Euro) workshop on developing a strategy on youth involvement. Continued involvement of young people is planned.

The Agency is developing a national hand hygiene initiative that will be integrated into the schools curriculum. The first pilot scheme to improve hygiene and hand washing practice in primary schools was taken forward in the North West in consultation with a number of local partners. This pilot evaluated current material on the market and worked with 12 schools to identify which types of resources both teachers and pupils preferred. The findings from this work will form the basis of a larger pilot in another region during 2006/07. In order to gain the maximum impact this work is linking up with other key initiatives and agencies such as the National Patient Safety Agency's 'cleanyourhands' campaign and the Healthy Schools Programme.

The Agency recognises that an important element of becoming a 'young people friendly' organisation is ensuring that there are good communication routes. As part of this a public facing children's health section on the Agency website is under development and is expected to be launched in 2006/07.

The burden of disease report '*Health Protection in the 21st Century*', published in October 2006 included children's health as a cross cutting theme within each chapter, and included a chapter on children's health. The report identified gaps and priority areas for future work to improve children's health. The Agency will work with partners and stakeholders to identify how these priority areas will be taken forward.

Programme 7

To strengthen information and communications systems for identifying and tracking diseases and exposures to infectious chemical and radiological hazards

The surveillance strategy programme board developed a vision for surveillance over the next five years with an accompanying set of tasks, and work was completed on documentation setting out a high level framework for the principles and standards for surveillance systems operated by the Agency.

In the second half of the year the programme started work on delivering the strategic vision. The first steps included an analysis of the current situation and of unmet requirements in priority areas. A catalogue of surveillance systems used by the Agency was completed and analysed. This allows for systems to be evaluated, and will be undertaken jointly with Health Protection Scotland (HPS) using a shared evaluation model.

The programme also identified surveillance success stories since the inception of the Agency so that lessons could be learnt and exemplar systems identified. Projects to review the use of HPZone (which is a tool for local Health Protection Units to use that allows case and incident recording, risk assessment and management of response) as a system for national use in HPUs and an evaluation of Field Information Management Systems have begun.

Surveillance needs from Health Protection Agency programmes were requested in order to conduct a gap analysis between where the Agency is now and what is required. The programme aims to complete the gap analysis, identify candidate systems and recommend systems to be further developed and duplicate systems to be decommissioned.

Factors affecting the programme include the identification and implementation of an appropriate accountability framework for surveillance system operation and development. The completion and strengthening of the corporate IT infrastructure programme will also be critical to the programme's future development and performance. The main external factor affecting the programme is the NHS National Programme for Information Technology, which presents significant potential benefits through its development of an electronic health record linking clinical, pathology and prescribing data at primary and secondary care levels.

Future projects include defining standards for surveillance systems and their outputs, with respect to information, technology, operations and performance; the development of a plan for implementing technical and operational framework for surveillance within the Agency, based on wider deployment of existing systems that represent best practice, integration and/or decommissioning of other systems to reduce redundancy; and procurement or development of new systems to meet unmet needs (as identified through gap analysis).

Programme 8

To build and improve the evidence base through a comprehensive programme of research and development

The Agency's research and development (R&D) informs and supports both its work and that of others. The estimated spend from external contracts during the year was in excess of £10.9 million. This represents a 26 per cent increase over the three-year period 2003-06.

A five-year R&D strategy has been developed and published. In-year R&D priorities will be agreed as part of the R&D Business Planning Cycle.

This year, the Agency bid successfully for funding from a variety of research projects including a share of an £8.5 million project from the European Commission investigating environmental stressors in Europe. The Agency was also awarded a grant of £1.82 million from the UK Home Office to look at the detection of biomarkers for deliberate-release pathogens.

A significant award of £3.39 million was received from the Department of Health (DH) to investigate variant Creutzfeldt-Jakob disease (vCJD). Also in the public health area, DH asked the Agency to take over the National Chlamydia Screening Programme with a value of £1.13 million.

The Agency continues to play a major role in European surveillance of infectious diseases and health education. These aspects were reflected by two major grants from the EU for diphtheria surveillance and the development and dissemination of a school antibiotic and hygiene information pack.

Programme 9

Develop a skilled and motivated workforce

At the end of 2005, approximately 1000 staff had been fully assimilated to Agenda for Change (AFC) terms and conditions, and approximately 1400 posts had been through the initial phase of the job evaluation process. The process of implementing AFC for former National Radiological Protection Board staff also commenced.

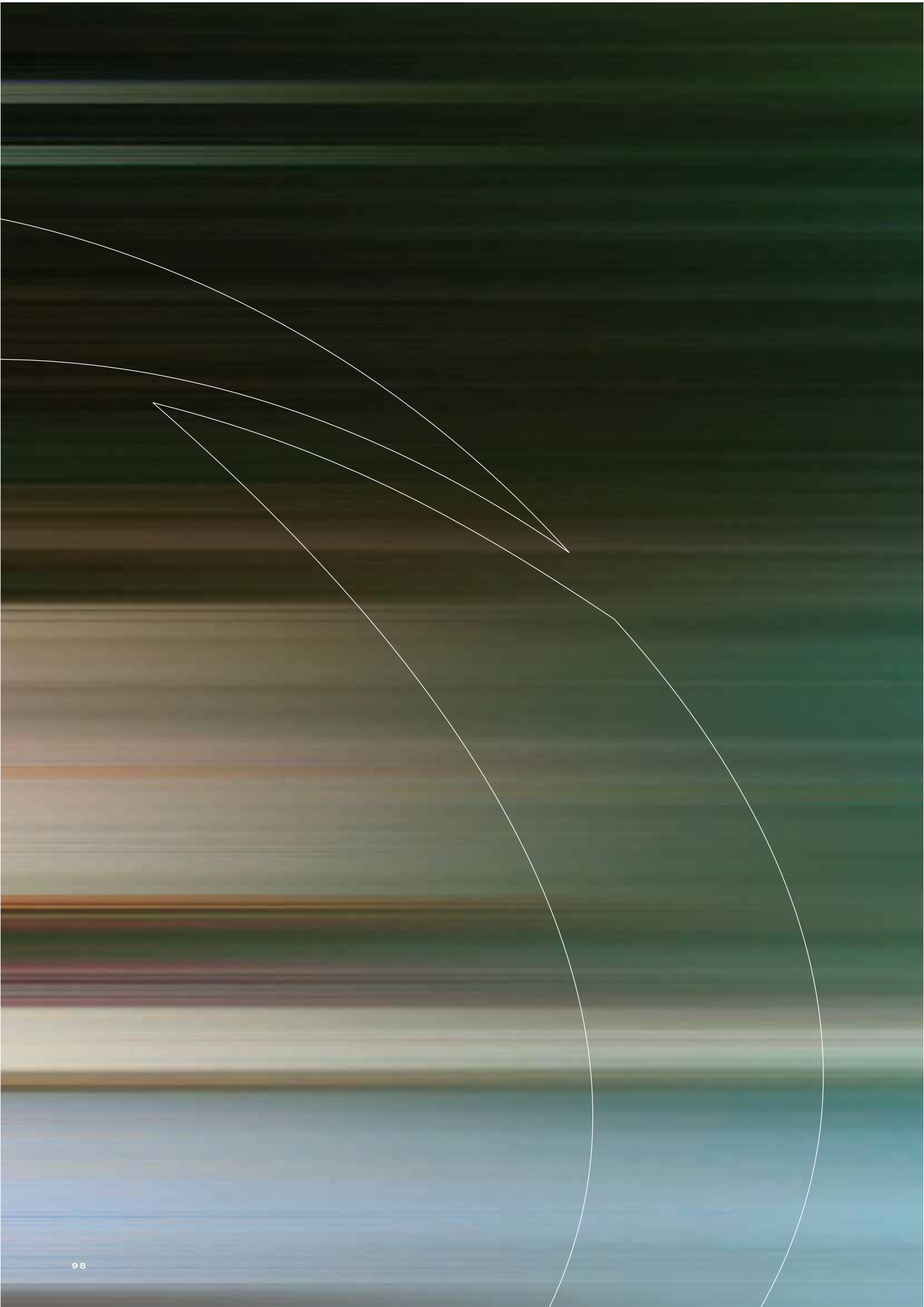
The implementation of the Knowledge and Skills Framework (KSF), as part of AFC, was the workforce development priority during 2005/06. To support this, more than 60 KSF training events, local briefings and follow-up sessions were held. The Agency now has an extensive internal library of KSF Outlines covering in excess of 100 posts. The focus is on ensuring that all posts covered by the AFC agreement have KSF Outlines by the end of 2006.

A corporate training programme was introduced, primarily informed by data from staff Personal Development Plans. Delivered in a partnership arrangement with external suppliers, utilisation rates are currently 91 per cent (places occupied v places available), with a satisfaction rating of 98 per cent. The programme is supported by a user-friendly Learning and Development site on the staff intranet.

An employee development policy was agreed and published, together with corporate guidelines for induction. Project proposals were submitted for the development of standard health protection competencies for staff working in Health Protection Units.

The full implementation of appraisal (with KSF) across the Agency remains a priority. In the 2005 Employee Opinion Survey, 77 per cent of respondents reported having had an appraisal in the previous 12 months (although formal returns to the HR Division were lower than this figure). Improvements are expected in this area in 2006/07.

Other priorities for the programme for 2006/07 include completion of the assimilation of all Agency staff to AFC terms and conditions, and implementing the improvements recommended as a result of the 2005/06 Employee Opinion Survey. A further priority will be addressing senior management succession planning, for which a project plan is already in place.



Programme 10

To manage knowledge and share expertise

Over the course of the year, 5,000 pages and 2,000 embedded documents were added or updated on the Agency's website, which was named as one of the five most useful UK health websites by The Guardian newspaper. Over 4,500 pages and documents were added or updated on the staff Intranet, and improved information location and retrieval facilities were added.

The programme coordinated the National Knowledge Service tuberculosis pilot. This was undertaken in collaboration with partners in the NHS, Department of Health and charitable organisations. They produced a range of information resources for health professionals, carers and patients, and revised and updated an on-line decision support system for clinical staff. These resources were highlighted in the recently published National Institute for Health and Clinical Excellence (NICE) Guidelines on Tuberculosis.

Beyond the Agency, the Goal 10 Programme provided the lead for the NHS Connecting for Health 'Do Once and Share' project on tuberculosis. This mapped out care pathways and information flows for the detection and management of tuberculosis, and will inform the NHS National Programme for Information Technology systems development.

Other information management system developments included the implementation of an online catalogue of books and reports (about 12,000 items), journal holdings, 250,000 selected journal articles from 1988 onwards, and details of all the Agency / Public Health Laboratory Service staff publications since 1987.

The next year will see the implementation of a content management system that will improve resilience and editorial process control for the website and intranet. The completion of this project will enable the programme to start work on the development of the National electronic Library for Health Protection, as a specialist branch of the NHS National Library for Health. The programme board will also respond to the new Public Health Information and Intelligence Strategy that is being implemented in response to the government's White Paper Choosing Health. A major initiative in this respect in the coming year will be the development of community health protection profiles.

Programme 11

To build on and develop the intellectual assets of the organisation in partnership with industry and other customers, in order to better protect the public

To enhance and realise the value of the Agency's intellectual assets, rigorous systems were put in place to identify opportunities at an early stage.

Workshops and technology-scouting exercises around the Agency were organised on a range of topics in order to identify opportunities and assess their value. The Agency's Innovations Competition, for example, elicited some promising ideas which the Agency is looking to develop.

The Agency, as a member of the Interact Partnership, was successful in winning a third round of funding from the Department of Trade and Industry for Intellectual Property development and exploitation.

The Agency appointed business development managers to cover all its Centres and Divisions in order to focus on winning international contracts. Opportunity Assessment Groups met on a regular basis, and significant contracts were awarded by UK and overseas government agencies, commercial companies based in Europe, North America and Asia, multi-national organisations, and charities. These contracts strengthened and complemented the Agency's core functions.

Particular successes were the formation of Agency's first spinout company, Syntaxin Ltd, the launch by Genencor of Prionzyme (TM), a product based on Health Protection Agency technology for removal of prions associated with variant Creutzfeldt - Jakob disease (vCJD), and the licensing to OPi of the life-saving leukaemia drug Erwinase. These successes, of course, have built on technology built by the Agency over many years of research and development. The focus will now shift to development of some of the emerging opportunities across the Agency which have been identified in the course of the past year.

Programme 12

To raise the understanding of health protection and involvement of the public and ensure they have access to authoritative, impartial and timely information and advice

The communications division continued to improve the quality and timeliness of the Agency's public-facing communications including reports, press releases, guidance and new material going on to the website, ensuring all information was accessible, useful and people-friendly.

The division provided a 24/7 service to the media and to Agency staff at national, regional and local levels. The demand placed upon the Division increased exponentially as awareness of the Agency and its brief grew among the media, stakeholders and the public.

In an average month, both nationally and locally, the Agency received between 500 and 800 mentions in the print media, and staff participated in an average of 100 to 150 broadcast and print interviews. This was alongside providing expert scientific press briefings for the publication of Agency reports, and supplying factual background material to ensure journalists were well informed and had the most recent facts and figures.

The division continued to develop and assist with the roll out of a series of public engagement projects across the country, the majority focussing on children or groups disproportionately affected by health issues. Initiatives included a hand-hygiene project in the North West to improve children's awareness of hand washing and a play called 'Emma' to teach children about sexual health. Pupils also visited the Agency to understand more about its work, and lectures on pandemic influenza were given at colleges and the Science Museum in London.

The division worked productively with stakeholders including the NHS, local and central government, the Environment Agency, the Food Standards Agency, the Health and Safety Executive, and academic and scientific partners.

A range of communications projects are in the pipeline. These include extending the mobile phone texting service to issue public health messages which was piloted among students in the East Midlands; a conference for children in the West Midlands to increase their knowledge of health protection; and the introduction of a publications feedback form to obtain the views of people who are in receipt of the Agency's reports and advice.

Programme 13

To strengthen health protection at local and regional levels

2005/06 was a year of major change for Local and Regional Services. Implementation of the Board policy of "Strengthening the Front Line" has resulted in the creation of two divisions, the Regional Microbiology Network and Local and Regional Services with new managerial arrangements at national and regional levels.

Considerable progress was made in designing the Health Protection Unit for the sustainable communities of the future. The "Intelligent HPA" project has focussed on the needs of Health Protection units to be local enough to be responsible to communities, but large enough to sustain expertise and to deal with the full range of health threats. Considerable attention has been given to clarifying the roles, responsibility, functions and outputs of units within a range of scenarios leading to clarification of the key inter-agency relationships that need to be managed. The national expert support and the technical tools, such as surveillance systems and risk algorithms needed to meet justifiably high expectations that communities have for health protection, are also being defined.

Programme 14

To contribute to UK international health objectives and to global health

The Agency's international profile and contribution to UK international health objectives continued to develop during 2005/06.

Events of note included the designation of the Agency's 2005 Annual Conference as a UK European Union (EU) Presidency Event and the secondment of a senior staff to the European Centre for Disease Control to support the establishment and operation of this new EU organisation.

The World Health Organisation (WHO) continued to request the expertise of the Agency's staff for international health protection issues via short-term secondments, advice from the WHO-collaborating centres within the Agency, and Agency participation in WHO meetings and seminars.

The Agency also participated in a health protection seminar in South Africa at the request of the South African Ministry of Health under the aegis of the Department of Health/South Africa Memorandum of Agreement on health co-operation.

International collaboration and the exchange of good practices on global health protection priorities, including pandemic influenza preparedness, were undertaken with many countries. These included China (frequently as part of the Department of Health's memoranda of understanding on health issues), Hong Kong (the Agency has a memorandum of understanding with the Centre for Health Protection in Hong Kong), and with organisations in over 40 other countries.

Future projects for the international programme include the development of other key international partnerships with health protection organisations worldwide; support for the International Association of National Public Health Institutes (of which the Agency is a founder member); and supporting the health protection work of the European Centre for Communicable Diseases (ECDC) and the WHO.

Programme 15

Making it happen - building the infrastructure to support effective operational functions

It is the aim of the Agency's support functions to provide efficient, economic and effective services to the rest of the organisation, thus ensuring operational and frontline staff have the infrastructure and the tools they need to achieve their strategic goals.

During 2005/06, we have continued our programme of harmonisation and modernisation of systems and processes whilst maintaining a stable and reliable service and minimising disruption to the rest of the organisation. Particular highlights include:

- The successful implementation of a harmonised and integrated finance and resource management system
- The reorganisation of finance, with a streamlined accounting services function being delivered from a single location
- The establishment of an Agency-wide Expenditure Management Programme, with a number of initiatives already generating substantial procurement savings
- Further rationalisation of the Agency's estate, from 140 to 95 properties. Work has also been undertaken to ensure that all properties are fit for purpose and represent best value to the Agency
- Investment in the information systems infrastructure has continued and has succeeded in substantially stabilising the Agency's IT. The programme of work underway to deliver a unitary, cost-effective and business-orientated infrastructure is progressing to budget and plan.

The harmonisation and modernisation programme has already generated substantial savings which are being redirected towards the Agency's priority frontline services.

Financial Review

Overview

The Agency's third year of operation has proved again to be a financially challenging year. The remit of the Agency continues to grow, exerting significant pressure on the available financial resources, whilst the Agency progressively develops an internal organisation that can fulfil the remit. The Agency is continuing to expand, and merged with the National Radiological Protection Board (NRPB) on 1 April 2005. In accordance with financial reporting standards, the financial information for 2005/06 has been presented, and that for the prior periods restated, as if the NRPB had been part of the Agency throughout the current and prior accounting periods. Following the Department of Health's "Arms Length Bodies" review in 2004, the Secretary of State announced that the Agency should, by absorption, merge with the National Institute for Biological Standards and Control (NIBSC), subject to consultation and legislation. The merger with NIBSC is expected to be completed by April 2008 and we are already working in close partnership.

Result for the year

Despite suffering a number of cost pressures which arose from factors outside the control of the Agency, we completed the year ended 31 March 2006 with a small surplus before exceptional items of £3.3 million The most significant ongoing cost pressures relate to our staff costs. We have suffered an unfunded increase of about £2 million to meet the extra costs of implementing the consultants' contract and an additional £2 million for the estimated unfunded costs of implementing Agenda for Change from 1 October 2004. The exceptional item has occurred as a result of a revised actuarial valuation of our pension schemes. This was required in order to increase the early retirement provision we inherited from our predecessor organisations.

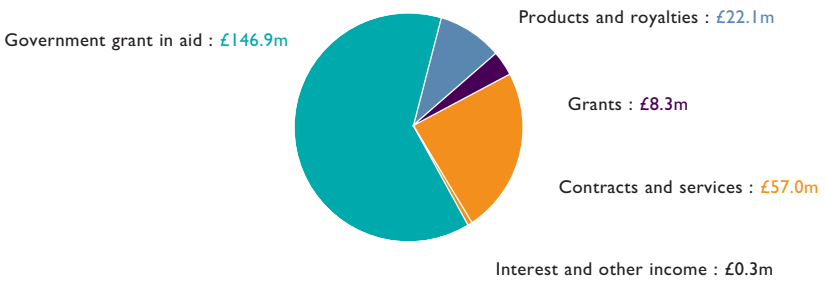
We managed to absorb all of the ongoing cost pressures and part of the early retirement provision increase, ending the year with a deficit of £2.5 million compared to a restated deficit of £893,000 in 2004/05. This is added to the cumulative Income and Expenditure Account restated deficit brought forward on 1 April 2005 of £7.8 million to give a cumulative Income and Expenditure Account deficit carried forward of £10.3 million, of which £7.0 million was inherited from our predecessor organisations.

Government grant in aid

During the year the Agency received Government grant in aid of £134 million revenue and £9m capital, compared to £129 million revenue and £14m capital in 2004/05. The derivation of the total grant in aid and income received and its reconciliation to the amount accounted for in the income and expenditure account of £147 million are included in the notes to the financial statements.

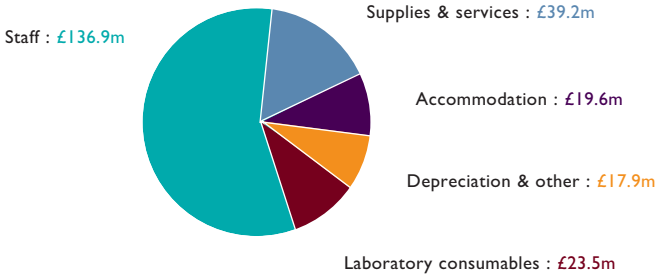
Operating income

The Agency's total operating income from non grant in aid sources has increased by 4 per cent from £84.5 million in 2004/05 to £87.5 million this year. This represents 37 per cent of the Agency's total income and provides a substantial contribution to our overheads and to the levels of staff available for core public health purposes. The total income of £234.6 million may be illustrated as follows:



Expenditure

Total expenditure for the year has increased from £220.6 million in 2004/05 to £237.1 million this year. This represents a 6 per cent increase after allowing for the £3.3 million pension provision adjustment exceptional item. The increase mostly reflects the increased activity levels and the cost pressures mitigated by our continuing savings programme. The analysis of the total expenditure of £237.1 million incurred during the year may be illustrated as follows:



Fixed Assets

The Agency incurred capital expenditure of £15.6 million (2005: £8.2 million), mostly to upgrade its laboratory facilities, accommodation and infrastructure. All capital expenditure is funded by Government grant in aid from the Department of Health.

Investments

To build on and develop the intellectual assets of the organisation in partnership with industry, the Agency formed its first spinout company, Syntaxin Limited, with substantial investment from third party investors. The Agency has a minority shareholding, classed as an investment, and will work with the company to convert leading research into products that will deliver direct health benefits to the public.

Infrastructure

At the time of establishing the Health Protection Agency, it was well known that the Agency's corporate support services required substantial work to ensure that they would provide the appropriate level of support to enable the front-line divisions to achieve their aims and to create the systems, processes and infrastructure appropriate to

meeting the needs of a modern and effective Agency. It was always recognised that work to harmonise both procedural and physical systems across the corporate service areas would be necessary and this was exacerbated by the chronic lack of investment in some parts of the Agency's inherited infrastructure. This modernisation programme and harmonisation has focused on the following areas:

- The implementation of a harmonised finance and resource management system managed by a single finance department
- The upgrading and stabilisation of our IT infrastructure
- The requirement to address the most urgent and critical accommodation issues in our local and regional services
- The building of an appropriately robust web presence
- The requirement to fund any redundancies arising from the creation of the Agency
- The harmonisation of HR policies, procedures and the terms and conditions of employment.

During 2005/06 work to progress this modernisation and harmonisation programme has continued.

Financial Position

The Agency has no powers to borrow, invest surplus funds or purchase foreign currency with grant in aid from the Government. Financial assets and liabilities are generated by day-to day operational activities and are not held to change the risks facing the Agency in undertaking its activities. The Agency has no borrowings and relies primarily on funding from the Department of Health for its own cash requirements.

Accounting policies

The accounts are prepared under United Kingdom generally accepted accounting principles, using appropriate accounting policies consistent with those used in the 2004/05 accounts. Further details of the accounting policies are set out in the notes to the financial statements. The accounting policies of the merged National Radiological Protection Board have been aligned with the Agency and the merger adjustments are set out in the notes to the financial statements.

Going concern

The Agency has considered the results for the year, the amounts owed by the Agency, its financial position at the end of the year, the continuing support of the government and the Health Protection Agency Act 2004. Taking all of these factors into consideration, the Agency believes that it is appropriate for the accounts to be prepared on a going concern basis.

Post balance sheet event

The early retirement provision of £7.2 million with the NHS Pensions Agency has been paid off during May 2006.

Statement of payment practices

It is the Health Protection Agency's policy to pay suppliers in accordance with the Better Payments Practice Code. For the year ended 31 March 2006, 89 per cent (2005: 74 per cent) of invoices (which amounted to 87 per cent (2005: 62 per cent) of the total value of payments) were paid within 30 days of the invoice being registered. Measures to continue the improvement of the Agency's payment performance are in place and will be facilitated by the ongoing implementation of the new Agency-wide financial system.

Audit

The Agency's auditor is the Comptroller and Auditor General. Details of the audit fee for the year are disclosed in the notes to the financial statements.

Other than the statutory audit of the financial statements, the Comptroller and Auditor General has not provided any other services to the Health Protection Agency during the year ended 31 March 2006.

During the audit of these financial statements my staff and I have co-operated fully with the Comptroller and Auditor General. I have taken all feasible steps to ensure that I am fully aware of all information pertinent to the audit and to ensure that this information is notified and made available to our auditors. Consequently, as far as I am aware, there is no relevant audit information which has not been available to our auditors.

PROFESSOR PAT TROOP CBE
CHIEF EXECUTIVE
30 JUNE 2006

Accounts 2006

Statement of Accounting Officer's responsibilities

Under The Health Protection Agency Act 2004, the Secretary of State (with the consent of HM Treasury) has directed the Health Protection Agency to prepare for each financial year a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Health Protection Agency and of its income and expenditure, recognised gains and losses and cash flows for the financial year.

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

- observe the Accounts Direction issued by the Secretary of State and approved by HM Treasury, including the relevant accounting and disclosure requirements;
- apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the financial statements; and
- prepare the financial statements on a going concern basis.

The Accounting Officer for the Department of Health has appointed the Chief Executive as the Accounting Officer for the Health Protection Agency. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the Health Protection Agency's assets, are set out in the Accounting Officers' Memorandum issued by HM Treasury and published in Government Accounting.

Statement on internal control

SCOPE OF RESPONSIBILITY

As Accounting Officer I have responsibility for maintaining a sound system of internal control that supports the achievement of the Board's policies, aims and objectives; whilst safeguarding the public funds and Agency's assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Government Accounting.

The relationship between the Health Protection Agency and its sponsoring department, the Department of Health, is specified in the Management Statement. The Agency's business plan, objectives and associated risks are discussed at the annual accountability meeting with the Minister for Public Health and at the quarterly review meetings with officials from the Department of Health and from the devolved administrations as appropriate.

Accountability within the Health Protection Agency is exercised through:

- the Board and the Audit Committee. The Agency's Board has established an Audit Committee, under the Chairmanship of a non-executive Board member, to support their corporate governance role and me in my responsibility for risk, controls and associated assurance;
- an Executive Group comprising all Centre and Divisional Directors and with myself as the Accounting Officer. Executive Directors are personally accountable for the management of the risks within their Centres and Divisions.

THE PURPOSE OF THE SYSTEM OF INTERNAL CONTROL

The system of internal control is designed to manage risk to a reasonable level, rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable, and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of the Board's policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control has been in place in the Agency for the year ended 31 March 2006 and up to the date of approval of the annual report and accounts, and accords with HM Treasury guidance.

CAPACITY TO HANDLE RISK

The Agency aims to minimise adverse outcomes such as harm, loss or damage to the organisation, its people or property through adequate supervision and training, appropriate delegation, continuous review of processes and the environment, and the sharing of lessons learned and best practice. This is achieved, primarily, through the Adverse Incident Reporting system, available to employees through the Agency's intranet, and managed by the Corporate Affairs Division.

The Agency's risk management policy and approach set out responsibilities at all levels including senior-level leadership for the risk management process. In addition, risk management is included as part of all Centre Directors', Divisional Directors' and other senior staff members' performance criteria. Risk management is being included in job descriptions and person specifications, and is part of the staff appraisal process.

Executive directors and management staff have attended risk management workshops to equip them in assessing risks, and to demonstrate methods of promoting risk management. A programme of risk management training for managers is in place, and guidance is provided to staff through the Agency's intranet.

Statement on internal control
Continued

THE RISK AND CONTROL FRAMEWORK

A Strategic Risk Register is maintained by the Executive Group and reviewed periodically by the Board. A bottom-up approach is also in place where risks are reported via risk registers, verbally during staff and management meetings, or through written reports. These mechanisms help ensure that the appropriate filtering and delegation of risk management is in place. The risks identified at a centre level are updated quarterly and are fed into the strategic risk register where appropriate.

Assessment of the adequacy of controls is a vital part of our systematic approach that attempts to limit risk to an acceptable residual level, rather than obviate the risk altogether. Staff are encouraged to balance cost with control to help ensure that value for money is achieved.

It is a requirement that all centre and division business plans, and major business cases include a risk assessment.

An adverse incident reporting policy and procedure have been implemented to provide a formal mechanism for reporting and learning from incidents across the Agency. As part of this, a real-time electronic incident reporting and investigation system is being implemented. The Agency has a formal complaints procedure which is published on the Health Protection Agency website.

A Risk Management Group has been established to develop the Agency's approach to risk management, and identify and respond to crosscutting operational risks.

A Clinical and Health Protection Governance Group has been established to ensure that robust clinical and health protection governance systems operate throughout the Agency.

The risk of a complex organisation is difficult to assess. A broad framework based on a risk matrix is used to help staff assess risk relating to their specific area of work.

An assurance framework is being developed, along with a mechanism to monitor progress against the Department of Health's *Standards for Better Health*, through the Healthcare Commission's *Health Check* assessment process.

The Agency's work involves a large number of stakeholders, with work carried out through partnerships and contractual agreements. An initial review of these relationships was completed by the Executive Group during 2005, and key risks are being identified and discussed with partners to establish a common understanding and to clarify responsibilities.

The Emergency Response Liaison Group ensures that the Agency can respond to emergencies. Accountability lies with Centre Directors, and through Regional Directors to local teams. The Health Protection Agency has been involved in, and has undertaken, a number of exercises to improve our preparedness and there is a rolling programme of exercises. Work with partners and other stakeholders to meet the requirements of the Civil Contingencies Act has been carried out at regional and local levels by emergency planners and resilience groups.

REVIEW OF EFFECTIVENESS

As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and executive managers who have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of my review of the effectiveness of the internal control system by the Board and the Audit Committee and a plan to address weaknesses and ensure continuous improvement of the system is in place.

The Agency's Board receives regular reports from the Chairman of the Audit Committee concerning risk, control and governance, and associated assurance. The Audit Committee is fully committed to ensuring that corrective action is taken in a timely manner where necessary.

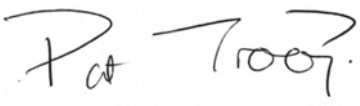
The Integrated Governance Group (IGG), reviews governance activities within the Agency and identifies the actions necessary for improvement. The appropriateness, effectiveness and progress of the risk management strategy, policy and approach are monitored by the IGG, with the aid of an agreed rolling work plan. The IGG reports and makes recommendations to the Audit Committee. Liaison and joint attendance between the IGG, the Audit Committee and the Health and Safety Strategy Group helps to ensure that a consistent approach is taken.

Internal Audit provides an independent, objective assurance and consulting service designed to add value and improve the Agency's operations. Its work is based on an agreed audit plan, which is carried out in accordance with Government Internal Audit Standards. This helps ensure that the work undertaken by Internal Audit provides a reasonable indication of the controls in operation across the whole of the Agency. Findings from work carried out during the year are presented to me and the Audit Committee. In addition, the Head of Internal Audit provides me with copies of all final reports and an annual written statement setting out a formal opinion on the adequacy, reliability and effectiveness of the systems and controls in place across the Agency.

CONTROL ISSUES DURING THE YEAR

At 1 April 2005 the Agency implemented a new finance and resource management system, operated by a newly established in-house financial accounting function, designed to replace the various accounting systems of its predecessor bodies operated by a combination of out-sourced and inherited staff, in order to provide better accounting and financial information to the Agency. The system is undergoing a phased implementation which extends into 2006/07.

As would be expected in any normal implementation of a fundamental system of this type, allied to the establishment of a totally new function to operate it, some of the standard controls that would be expected to operate in an ongoing finance system were not fully operated for a period of time following the implementation date whilst systems, procedures and new staff were becoming fully operational. However, compensating checks and controls were put in place and all essential key controls were reinstated fully in the course of the year. No significant errors or omissions in the accounting records have been identified as a result of the temporary control arrangements.



Professor Pat Troop
Chief Executive
30 June 2006

The certificate and report of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements of the Health Protection Agency for the year ended 31 March 2006 under the Health Protection Agency Act 2004. These comprise the income and expenditure account, the balance sheet, the cashflow statement and the statement of total recognised gains and losses and the related notes. These financial statements have been prepared under the accounting policies set out within them.

RESPECTIVE RESPONSIBILITIES OF THE CHIEF EXECUTIVE AND AUDITOR

The Chief Executive is responsible for preparing the Annual Report, the Remuneration Report and the financial statements in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State with the approval of HM Treasury and for ensuring the regularity of financial transactions. These responsibilities are set out in the Statement of the Chief Executive's Responsibilities.

My responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements, and with International Standards on Auditing (UK and Ireland).

I report to you my opinion as to whether the financial statements give a true and fair view and whether the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State with the approval of HM Treasury. I also report whether in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them. I also report to you if, in my opinion, the Annual Report is not consistent with the financial statements, if the Agency has not kept proper accounting records, if I have not received all the information and explanations I require for my audit, or if information specified by relevant authorities regarding remuneration and other transactions is not disclosed.

I review whether the statement on page 111 reflects the Agency's compliance with HM Treasury's guidance on the Statement on Internal Control, and I report if it does not. I am not required to consider whether the Accounting Officer's statements on internal control cover all risks and controls, or form an opinion on the effectiveness of the Agency's corporate governance procedures or its risk and control procedures.

I read the other information contained in the Annual Report and consider whether it is consistent with the audited financial statements. This other information comprises only the Annual Report, the unaudited part of the Remuneration Report and the Management Commentary. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements. My responsibilities do not extend to any other information.

BASIS OF AUDIT OPINION

I conducted my audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. My audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements and the part of the Remuneration Report to be audited. It also includes an assessment of the significant estimates and judgments made by the Chief Executive in the preparation of the financial statements, and of whether the accounting policies are most appropriate to the Agency's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements and the part of the Remuneration Report to be audited are free from material misstatement, whether caused by fraud or error and that in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements and the part of the Remuneration Report to be audited.

OPINIONS

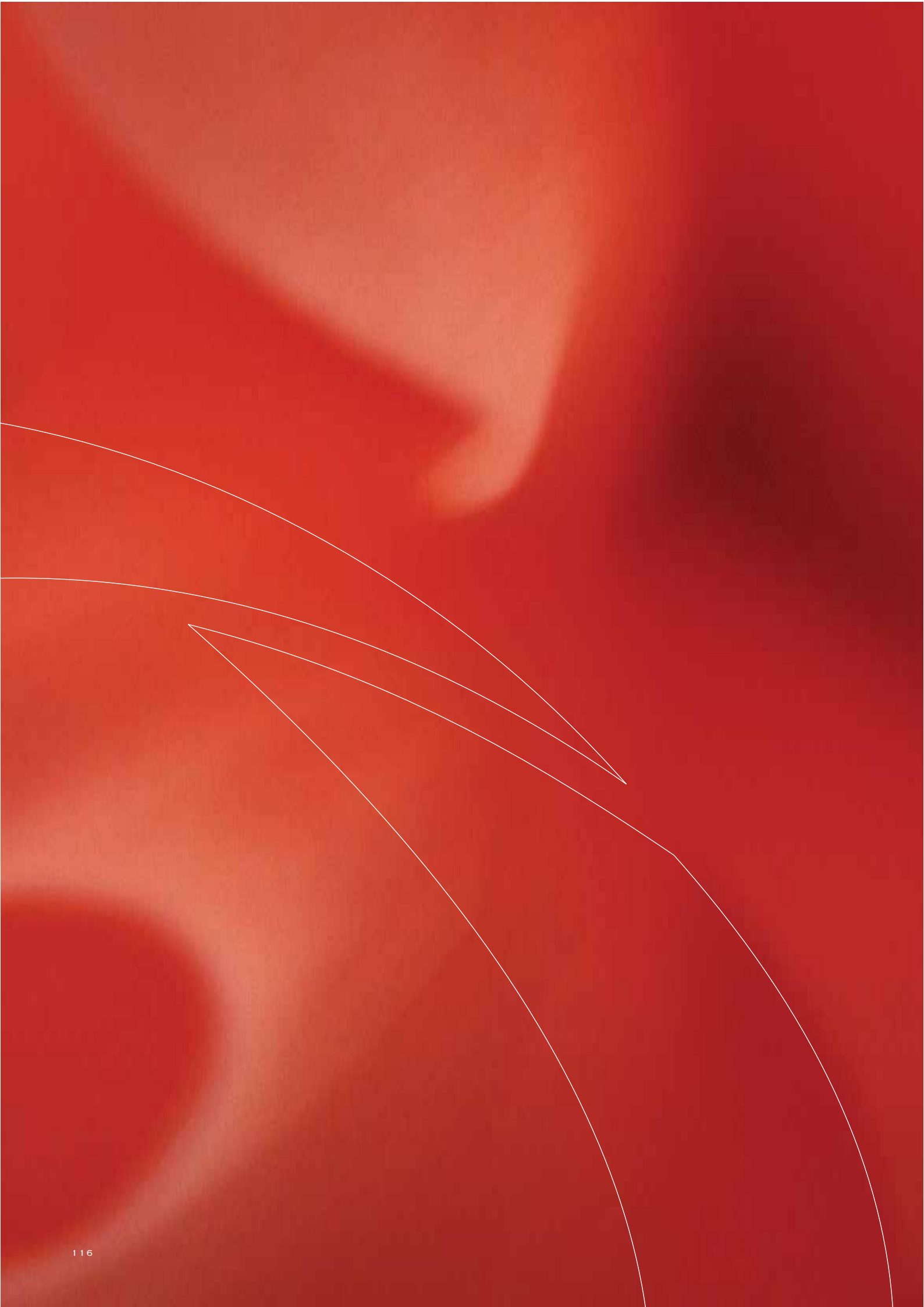
In my opinion:

- the financial statements give a true and fair view, in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State with the approval of HM Treasury, of the state of the Agency's affairs as at 31 March 2006 and of its deficit for the year ended;
- the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State with the approval of HM Treasury; and
- in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

I have no observations to make on these financial statements.

John Bourn
Comptroller and Auditor General
7 July 2006

National Audit Office
157-197 Buckingham Palace Road
Victoria
London SW1W 9SP



Income and Expenditure Account

FOR THE YEAR ENDED 31 MARCH 2006

	Note	*2006 £'000*	*Restated 2005 £'000*
Income			
Government grant in aid	2	**146,893**	135,092
Operating income	3	**87,483**	84,475
Interest receivable		**241**	118
Total income		**234,617**	219,685
Expenditure			
Staff costs	4	**136,930**	127,683
Other operating charges	7	**87,109**	83,291
Exceptional item: pension provision adjustment	8	**3,257**	-
Amortisation and depreciation	9,10	**9,780**	9,604
Total expenditure		**237,076**	220,578
Operating (deficit) before the cost of capital charge		**(2,459)**	(893)
Cost of capital charge		**(4,596)**	(3,752)
Operating (deficit) for the year		**(7,055)**	(4,645)
Reversal of cost of capital charge		**4,596**	3,752
(Deficit) for the year carried forward	17	**(2,459)**	(893)

The notes on pages 120 to 139 form part of these accounts. All operations are continuing.

Statement of Total Recognised Gains and Losses

FOR THE YEAR ENDED 31 MARCH 2006

	Note	*2006 £'000*	*Restated 2005 £'000*
(Deficit) for the year	17	**(2,459)**	(893)
Unrealised surplus on revaluation of tangible fixed assets	10	**3,060**	7,143
Total gains recognised for the year		**601**	6,250

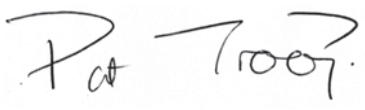
The notes on pages 120 to 139 form part of these accounts.

Balance Sheet

FOR THE YEAR ENDED 31 MARCH 2006

	Note	*2006 £'000*	*Restated 2005 £'000*
Fixed assets			
Intangible fixed assets	9	**931**	1,184
Tangible fixed assets	10	**139,305**	130,359
Investments	11	**1**	-
Total fixed assets		**140,237**	131,543
Current assets			
Stock	12	**4,322**	6,548
Debtors	13	**35,743**	34,994
Cash at bank and in hand	14	**8,840**	14,219
Total current assets		**48,905**	55,761
Creditors: amounts falling due within one year	15	**(44,642)**	(52,897)
Net current assets		**4,263**	2,864
Total assets less current liabilities		**144,500**	134,407
Provisions	16	**(15,380)**	(10,707)
Net assets		**129,120**	123,700
Capital and reserves			
Government grant reserve	17	**139,422**	131,543
Income and expenditure account	17	**(10,302)**	(7,843)
Total capital and reserves		**129,120**	123,700

The notes on pages 120 to 139 form part of these accounts. All operations are continuing.



Professor Pat Troop
Chief Executive
30 June 2006

Cash Flow Statement

FOR THE YEAR ENDED 31 MARCH 2006

	Note	*2006 £'000*	*Restated 2005 £'000*
Net cash (outflow) / inflow from operating activities	18	**(3,985)**	389
Returns on investment and servicing of finance			
Interest received		**241**	118
Capital expenditure and financial investment			
Payments to acquire tangible fixed assets	10	**(15,583)**	(7,506)
Payments to acquire investments	11	**(1)**	-
Payments to acquire intangible fixed assets	9	**-**	(855)
Receipts from the sale of assets to the NHS on 1 April 2003		**1,162**	1,163
Receipts from the sale of tangible fixed assets		**145**	23
Net cash (outflow) before financing		**(18,021)**	(6,668)
Financing			
Capital grants received	2	**14,769**	8,705
Funds received from the sale of assets to the NHS returned to the Department of Health		**(1,162)**	(1,163)
(Decrease) / increase in net cash in the year	14	**(4,414)**	874

The notes on pages 120 to 139 form part of these accounts. All operations are continuing.

Notes to the Financial Statements

1. ACCOUNTING POLICIES

a) Principal accounting policies

The accounts for the Health Protection Agency have been prepared under the historical cost convention, modified to include the revaluation of fixed assets, and comply with the provisions of the Health Protection Agency Act 2004 (Schedule 1).

Without limiting the information given, the accounts have been prepared in accordance with the Accounts Direction issued by the Secretary of State for Health with the approval of HM Treasury, and are in accordance with:

(i) the Companies Act 1985;

(ii) generally accepted accounting principles in the United Kingdom (UK GAAP); and

(iii) the accounting and disclosure requirements of 'Government Accounting' and HM Treasury guidance 'The Government Financial Reporting Manual' insofar as these are appropriate to the Health Protection Agency.

The aforementioned direction and guidance requires the following departures from the Companies Act and accounting standard requirements:

(i) the note on historical cost profit and losses required under Financial Reporting Standard 3 'Reporting Financial Performance' has not been disclosed; and

(ii) the historical cost information regarding assets included at valuation as required by paragraph 33(3) of Schedule 4 to the Companies Act 1985 has not been disclosed.

b) Merger with the National Radiological Protection Board

On 1 April 2005 the National Radiological Protection Board (NRPB) merged with the Health Protection Agency, forming its new Radiation Protection Division (RPD). The RPD consists of its headquarters at Chilton in Oxfordshire, its Occupational Services Department at Leeds, and Radiation and Environmental Monitoring Scotland at Glasgow. The RPD, combined with the Chemical Hazards and Poisons Division of the Health Protection Agency, to form the Agency's Centre for Radiation, Chemical and Environmental Hazards (CRCEH). The Director of the Centre is Dr Roger Cox, the former Director of NRPB. The RPD carries out the Health Protection Agency's work on ionising and non-ionising radiations. It undertakes research to advance knowledge about protection from the risks of these radiations; provides laboratory and technical services; runs training courses; provides expert information and has a significant advisory role in the United Kingdom.

Prior year comparatives reflect the application of merger accounting principles under HM Treasury's Financial Reporting Manual, and the Accounting Standards Board's Financial Reporting Standard 6. Detailed disclosure information is provided at note 25.

c) Operating income

Operating income comprises amounts receivable, excluding Value Added Tax, for goods and services supplied. Income on long term contracts is recognised as the work progresses, in accordance with the contractual arrangements and the stage completion of the work.

d) Government grant in aid receivable

Government grant in aid which contributes to the general activities of the Health Protection Agency is credited to the income and expenditure account as received.

Government grant in aid that finances specific revenue activities is credited to the income and expenditure account so as to match the income with the related expenditure. Any such specific Government grant in aid received before the expenditure to which it relates is charged to the income and expenditure account, is held as deferred income.

Government grant in aid received as a contribution towards capital expenditure is credited to the Government grant reserve and is released to income to match the depreciation charged over the life of the capital asset.

e) Other grants receivable

Grants receivable other than Government grant in aid are accounted for in the same way as Government grant in aid except that any amounts receivable as contributions towards capital expenditure are credited to an other grants reserve. No such capital grants were received in respect of Agency owned assets in the year to 31 March 2006.

f) Intangible fixed assets

Intangible fixed assets comprise software licences purchased from third parties with a life of more than one year. Individual licences with a life of less than one year, or a value below £5,000, are not capitalised. Such software costs are charged to the income and expenditure account as they are incurred.

Where capitalised, software licences are valued at cost, net of amortisation and impairment, or depreciated replacement cost where materially different. The cost or valuation of software licences, less their estimated residual values, is amortised on a straight-line basis over the life of the licence or the life of the related asset where there is no licence expiry date.

For intangible fixed assets funded by grants, each year an amount equal to the amortisation is transferred from the Government grant reserve and/or the other grants reserve to the income and expenditure account. Currently, all intangible fixed assets have been funded by Government grant in aid.

g) Tangible fixed assets

Freehold land is valued on an existing use basis. Buildings with a specialised use are valued at depreciated replacement cost and non-specialised buildings are valued at their open market value for their existing use. Independent valuations will be carried out every five years in accordance with guidance issued by the Royal Institute of Chartered Surveyors. The freehold land and buildings were valued on 31 March 2005 by the Valuation Office Agency. In the years where no valuation occurs, land and buildings are revalued using appropriate indices.

Individual items with a value below £5,000 are not capitalised. Tangible fixed assets of the same or similar type acquired around the same time and scheduled for disposal about the same time, or assets which are purchased at the same time and are used, and subsequently disposed of, together are grouped and treated as if they were individual assets. For tangible fixed assets funded by grants, each year an amount equal to the depreciation is transferred from the Government grant reserve and/or the other grants reserve to the income and expenditure account. For tangible fixed assets not funded by grants, the only

Notes to the Financial Statements
Continued

amount transferred from reserves relates to the excess of the actual depreciation over the historic cost depreciation which is transferred from the revaluation reserve to the income and expenditure account. Currently, all tangible fixed assets have been funded by Government grant in aid.

Other tangible fixed assets are valued at depreciated replacement cost. The depreciated replacement cost is calculated by applying, annually, appropriate indices to the cost.

h) Investments

Investments comprise the Agency's 24.41% holding of ordinary shares of £0.001 in the issued share capital of Syntaxin Limited, acquired for a cash consideration of £1,232.50 on 10 November 2005. There is no easily ascertainable market value for the shareholdings, so the Board has opted to disclose the holdings on a historic cost basis. Consideration of the market value, if readily ascertainable, will be part of an ongoing review process. It is expected that the Health Protection Agency's holding in Syntaxin relative to that of other shareholders will reduce with time as the investors commit further finance to the company, contingent on Syntaxin continuing to meet the objectives outlined in its business plan.

i) Depreciation

Depreciation is provided on all tangible fixed assets from the month of purchase, but not in the month of disposal, at rates calculated to write-off the cost of valuation of each asset evenly over its expected useful life as follows:

Asset category	Expected Useful Life
Freehold buildings	Up to 50 years as advised by the Valuation Office Agency
Leasehold land and buildings	Over the life of the lease
Fixtures and fittings	Up to 20 years as advised by the Valuation Office Agency
Plant and equipment	5 to 20 years
Vehicles	7 years
Information technology equipment	3 to 5 years

Freehold land, investments and assets under construction are not depreciated.

j) Stock

Stocks are valued at the lower of cost, or net current replacement cost if materially different, and net realisable value. For stock held for resale, net realisable value is based on estimated selling price less further costs expected to be incurred to completion. Work in progress is valued at cost, less the cost of work invoiced on incomplete contracts and less foreseeable losses. Cost means direct cost plus production overheads. Where necessary, provision is made for obsolete, slow moving and defective stocks.

k) Research and development

Research and development expenditure is charged to the income and expenditure account as incurred.

l) Taxation

The Agency, as a body corporate, is subject to the provisions of the Income and Corporation Tax Act 1988. However, as the majority of income is derived from Government grant in aid, no provision has been made in these accounts for any corporation tax liability.

m) Value Added Tax

The Health Protection Agency is registered for Value Added Tax (VAT). VAT is charged on invoices for business contracts relating to products, services and research activities. The Health Protection Agency recovers part of its input VAT proportionate to its business activities in relation to total income. Expenditure is shown net of recoverable VAT. Irrecoverable VAT is charged to the most appropriate expenditure or capitalised if it relates to a fixed asset.

n) Operating leases

Operating lease costs are charged to the income and expenditure account on a straight line basis over the lease term.

o) Foreign currencies

Transactions denominated in foreign currencies are translated into sterling at the exchange rate ruling on the date the transaction takes place or at the contracted rate if the transaction is covered by a forward exchange contract. Balances denominated in foreign currencies are translated into sterling at the exchange rate ruling at the end of the year. Exchange gains and losses are dealt with in accordance with Statement of Standard Accounting Practice 20.

p) Pensions

The Health Protection Agency provides pension schemes for the benefit of the majority of its employees, and participates in three defined benefit schemes:

1. The National Health Service (NHS) pension scheme;
2. The United Kingdom Atomic Energy Agency (UKAEA) Combined Pension Scheme; and
3. The Principal Civil Service Pension Scheme.

Although each is an unfunded scheme, they each receive contributions, partly from participating employees and partly from the Agency. Details of each scheme are included in the notes to the financial statements (note 6). Each scheme is multi-employer, and the scheme administrators prepare separate accounts which are subject to audit and regular actuarial review. Because of this, HM Treasury's Financial Reporting Manual (paragraph 6.5.2) requires the pension schemes to be treated as defined contribution schemes within these financial statements. The amount charged to the income and expenditure account is the contributions payable for the year.

In certain circumstances, employees taking early retirement are entitled to an enhanced lump sum and ongoing pension. The Health Protection Agency is responsible for meeting the additional cost of the lump sum, the full cost of the pension until normal retirement age and the enhanced element of the pension thereafter. A provision is made for the estimated future cost of early retirements at the time when the employee retires. Further details are provided within note 16.

q) Notional costs of capital

The income and expenditure account includes a notional charge for the cost of the Government funded capital employed during the year. The charge is calculated at 3.5% of the average net assets for the year, excluding cash balances held with the Office of the Paymaster General which do not attract interest and fixed assets funded by Grants other than the Government grant in aid. There are no other notional costs.

Notes to the Financial Statements
Continued

2. GOVERNMENT GRANT IN AID

	2006 £'000	Restated 2005 £'000
Department of Health	**140,303**	140,787
National Assembly for Wales	**376**	376
Scottish Executive	**640**	474
Consultants' clinical excellence award funding	**1,336**	1,242
Total Government grant in aid received	**142,655**	142,879
Government grant in aid transferred to capital (note 17)	**(14,769)**	(7,632)
Government grant in aid transferred from/(to) deferred income	**9,057**	(8,509)
Revenue Government grant in aid anticipated in 2003/04	**-**	(1,000)
Total revenue Government grant in aid received	**136,943**	125,738
Transfers from Government grant reserve in respect of:		
amortisation of intangible fixed assets (note 9)	**249**	103
depreciation of tangible fixed assets (note 10)	**9,531**	8,749
impairment of tangible fixed assets (note 17)	**-**	244
disposal of tangible fixed assets (notes 9 and 10)	**170**	258
Total Government grant in aid income	**146,893**	135,092

The capital funding relates wholly to the Government grant in aid from the Department of Health. The Government grant in aid from the National Assembly for Wales and the Scottish Executive is wholly revenue.

The Health Protection Agency has United Kingdom-wide responsibilities. In addition to the formal grant in aid reported above, the Agency received funding from the Northern Ireland Executive of £710,000 (2005: £577,000) to fund core work which is included within operating income (note 3). The Agency also received other income from United Kingdom Government departments for contract and grant work which is also included within note 3.

3. OPERATING INCOME

	2006 £'000	Restated 2005 £'000
Products and royalties	**22,078**	15,754
Contracts and services	**56,998**	60,252
Grants	**8,266**	7,677
Other operating income	**141**	792
Total operating income	**87,483**	84,475

4. STAFF COSTS

	2006 £'000	Restated 2005 £'000
Salaries and wages	**105,999**	95,332
Social security costs	**9,192**	8,978
Other pension costs	**11,781**	11,208
Total costs of staff employed	**126,972**	115,518
Agency and seconded staff	**8,718**	11,116
Redundancy and early retirement costs	**647**	2,005
Total costs of employed and other staff	**136,337**	128,639
Manufacturing staff costs transferred from / (to) finished goods	**593**	(956)
Total staff costs	**136,930**	127,683

5. EMPLOYEE NUMBERS

The average number of full-time equivalent staff employed during the year was as follows:

	2006	Restated 2005
Medical	**260**	258
Nursing	**180**	166
Professional, administrative and operational support	**847**	799
Scientific	**590**	578
Technical	**1,135**	1,127
Total employee numbers	**3,012**	2,928

The above figures relate to staff with a United Kingdom employment contract, and include those staff on maternity, sick, special or paternal leave and those staff on a career break, but only where they are being paid by the Agency.

In addition, during the year ended 31 March 2006 the Agency engaged staff on various agency, secondment and similar arrangements for variable time periods. Due to the nature of these engagements it is not possible to quantify the precise number of full-time equivalent persons engaged. It is estimated that the average number of persons engaged using these arrangements amounted to approximately 205 (2005: 270) whole time equivalents.

Notes to the Financial Statements
Continued

6. PENSION SCHEME

a) Pension scheme participation

The majority of the Agency's employees are covered by two pension schemes; the National Health Service (NHS) Pension Scheme and the Combined Pension Scheme. A minority of employees have retained their individual membership of The Principal Civil Service Pension Scheme, or have exercised other options available as a result of The Social Security Act 1986. The three schemes available to the employees of the Health Protection Agency are defined benefit schemes, all of whom prepare separate scheme statements, which are readily available to the public. Details of the two major pension schemes are provided below.

b) The NHS Pension Scheme

The NHS Pension Scheme is an unfunded multi-employer defined benefit scheme, the provisions of which are contained in the NHS Pension Scheme Regulations (SI 1995 No. 300). The Scheme is notionally funded, with payment liabilities underwritten by the Exchequer. Scheme accounts are prepared annually by the NHS Pensions Agency and are examined by the Comptroller and Auditor General. The Government Actuary's Department values the NHS Pension Scheme every four years, and those quadrennial reports are published. The Scheme has a money purchase Additional Voluntary Contribution (AVC) arrangement which is available to employees to enhance their pension benefits.

Between valuations the Government Actuary's Department provides an update of the scheme liabilities on an annual basis. The latest assessment of the liabilities of the Scheme is contained in the *Report of the Actuary*, which forms part of the *NHS Pension Scheme & Compensation for Premature Retirement Scheme Resource Accounts*, published annually. These accounts can be viewed on the NHS Pensions Agency website at www.nhspa.gov.uk. Copies can also be obtained from the Stationery Office.

Under NHS Pension Scheme regulations, the Agency and participating employees are required to pay contributions, as specified by the Secretary of State for Health. These contributions are used to defray the costs of providing the NHS Pension Scheme benefits. For the year ended 31 March 2006, employees were required to pay contributions of 6% (manual staff 5%) of pensionable pay. The employer's contribution amounted to 14% of pensionable pay; all of which were charged to the income and expenditure account as and when they become due.

The Agency is unable to identify its share of the underlying assets and liabilities of the scheme. Having sought advice, the Agency considers that FRS 17 and HM Treasury's Financial Reporting Manual requires the scheme to be accounted for as defined contribution in nature.

c) The Combined Pension Scheme

The Combined Pension Scheme (CPS) was set up as a statutory body with effect from 1 July 1997 as a result of merging the previous UKAEA Principal Non-Industrial Superannuation Scheme (PNISS) and the UKAEA Industrial Superannuation Scheme (ISS) and is managed by the UKAEA. It is a multi-employer scheme which provides defined benefits to its members.

In common with other public sector schemes the CPS does not have many of the attributes of normal pension schemes. All contributions are paid to and benefits paid by HM Government via the Consolidated Fund. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via the annual Parliamentary vote. Government does not maintain a separate fund and the scheme valuations are based on a theoretical calculation as to how a typical UK pension scheme would have invested the historical surplus of contributions over payments. There is no actual fund.

The nature of the CPS, supported as it is by the Government's Consolidated Fund and a theoretical portfolio of assets, has required the Agency to consider carefully the most appropriate treatment to meet the requirements of FRS 17 and present a true and fair view. Having sought advice, the Agency considers that FRS 17 and HM Treasury's Financial Reporting Manual requires the scheme to be accounted for as defined contribution in nature.

During the year ended 31 March 2006, the Agency chose to take advantage of the Government Actuary's recommendation, to CPS administrators, in respect of employer contributions to the scheme and paid contributions at a reduced level of 0.5% (2004-05: 0.5%). From 1st April 2006, HM Treasury replaced the method of calculating employers' contributions to unfunded pension schemes with the Superannuation Contributions Adjusted for Past Experience (SCAPE) methodology. Further details are available within each of the pension scheme reports. A consequence of this change is that, for the Combined Pension Scheme, the employers' contributions will increase from 0.5% to 17.3% with effect from 1st April 2006. This will result in costs of £1,646,000 in 2006-07 (2005-06: £46,000). The additional cost will be met by additional grant in aid funding.

d) Employer contributions

The Agency has accounted for employer contributions to these schemes, as if they were defined benefit schemes. Employer contributions were as follows:

	2006 £'000	*Restated 2005 £'000*
The National Health Service (NHS) Pension Scheme	**11,608**	10,912
The Combined Pension Scheme	**46**	44
Other pension schemes	**127**	10
Contributions in respect of continuing annual payments	**-**	242
Total employer pension contributions	**11,781**	11,208

7. OTHER OPERATING CHARGES

	2006 £'000	*Restated 2005 £'000*
Laboratory consumables and services	**23,490**	23,323
Supplies and services	**39,187**	37,614
Accommodation	**19,605**	17,126
Travel and subsistence	**4,366**	4,296
Auditor's remuneration	**140**	121
Bad and doubtful debt provision	**296**	173
Losses and gains on disposal of tangible fixed assets	**25**	240
Impairment of tangible fixed assets	**-**	398
Total other operating charges	**87,109**	83,291

Notes to the Financial Statements
Continued

8. EXCEPTIONAL ITEMS

The Agency inherited liabilities relating to staff who had taken early retirement or redundancy from two of its predecessor bodies, the Public Health Laboratory Service and the National Radiological Protection Board. Following an actuarial valuation carried out by the Government Actuary's Department as at 31 March 2006, the provision for these liabilities was increased by £3,257,000. This increase has been charged to the income and expenditure account for the year ending 31 March 2006 as an exceptional item in accordance with Financial Reporting Standard 3.

9. INTANGIBLE FIXED ASSETS

	Software licences £'000
Cost or valuation	
At 1 April 2005 (restated)	1,366
Additions	-
Disposals	(8)
At 31 March 2006	**1,358**
Amortisation	
At 1 April 2005 (restated)	182
Charge for year	249
Disposals	(4)
At 31 March 2006	**427**
Net book value	
At 31 March 2006	**931**
At 31 March 2005 (restated)	1,184

10. TANGIBLE FIXED ASSETS

	Land and buildings £'000	*Fixtures and fittings £'000*	*Plant and equipment £'000*	*Information technology equipment £'000*	*Vehicles £'000*	*Assets under construction £'000*	*Total £'000*
Cost or valuation							
At 1 April 2005 (restated)	109,433	-	17,789	4,881	176	7,905	140,184
Additions	-	-	272	23	10	15,278	15,583
Transfer of assets brought into use	5,344	1,869	1,358	1,485	-	(10,056)	-
Revaluations	2,623	8	426	1	2	-	3,060
Disposals	-	-	(342)	-	-	-	(342)
At 31 March 2006	**117,400**	**1,877**	**19,503**	**6,390**	**188**	**13,127**	**158,485**
Depreciation							
At 1 April 2005 (restated)	2,913	-	5,132	1,728	52	-	9,825
Charge for year	5,830	32	2,584	1,052	33	-	9,531
Disposals	-	-	(176)	-	-	-	(176)
At 31 March 2006	**8,743**	**32**	**7,540**	**2,780**	**85**	**-**	**19,180**
Net book value							
At 31 March 2006	**108,657**	**1,845**	**11,963**	**3,610**	**103**	**13,127**	**139,305**
At 31 March 2005 (restated)	106,520	-	12,657	3,153	124	7,905	130,359

Land and buildings

Freehold land and buildings have a net book value of £108,421,000 (2005: £106,284,000), leasehold land and buildings have a net book value of £236,000 (2005: £236,000).

Merger adjustments

The above note includes an adjustment to asset values arising from the need to ensure the accounting policies of the merged bodies are aligned. Full details are contained in note 25.

Third party owned assets

In addition to the above tangible fixed assets, the Agency held tangible fixed assets with a total cost of £980,000 (2005: £568,000) which were funded and remain in the ownership of third parties. These assets consisted of a modular building (£436,000) and plant and equipment (£544,000).

Restatement of opening values

In line with Financial Reporting Standard 15, the opening values for tangible fixed assets cost or valuation and depreciation at 1 April 2005 have been restated. This has reduced both the cost or valuation and depreciation as at 1 April 2005 by £10,145,000. The net book value at 31 March 2005 is unchanged.

Notes to the Financial Statements
Continued

11. INVESTMENTS

Investments comprise the Agency's 24.41% holding of ordinary shares of £0.001 in the issued share capital of Syntaxin Limited, acquired for a cash consideration of £1,232.50 on 10 November 2005. There is no easily ascertainable market value for the shareholdings, so the Board has opted to disclose the holdings on a historic cost basis. Consideration of the market value, if readily ascertainable, will be part of an ongoing review process. It is expected that the Health Protection Agency's holding in Syntaxin relative to that of other shareholders will reduce with time as the investors commit further finance to the company, contingent on Syntaxin continuing to meet the objectives outlined in its business plan.

12. STOCK

	2006 £'000	Restated 2005 £'000
Raw materials	**66**	133
Finished goods	**2,171**	4,378
Laboratory consumables and other stores	**2,085**	2,037
Total stock	**4,322**	6,548

The replacement cost of raw materials, laboratory consumables and other stores is not materially different from the balance sheet value.

13. DEBTORS

	2006 £'000	Restated 2005 £'000
Amounts falling due within one year		
Trade debtors	**14,205**	20,650
Accrued income	**9,751**	7,328
Prepayments	**2,802**	2,810
Other debtors	**8,756**	4,023
	35,514	34,811
Amounts falling due after more than one year		
Other debtors	**229**	183
Total debtors	**35,743**	34,994

The debtors amounts falling due after more than one year relate to lump sums paid to premature retirees from the Combined Pension Scheme. These amounts will be repaid by the Scheme administrators to the Agency on the retirees' normal retirement age, or death, whichever is earliest.

Intra-Government balances

Intra-Government balances within the totals for debtors are as follows:

	2006 £'000	Restated 2005 £'000
Balances with the Department of Health	**2,473**	3,893
Balances with NHS Trusts	**12,871**	10,152
Balances with other central Government bodies	**2,347**	4,010
Balances with local authorities	**1,532**	44
Total intra-Government balances	**19,223**	18,099

14. ANALYSIS OF CHANGES IN NET FUNDS

	31 March 2006 £'000	*Restated 1 April 2005 £'000*	*Change in year £'000*
Cash at bank and in hand	**8,840**	14,219	(5,379)
Overdraft (note 15)	**(2,802)**	(3,767)	965
Total cash	**6,038**	10,452	(4,414)

Cash balances can be split as follows:

	2006 £'000	*Restated 2005 £'000*
Paymaster General Account	**6,893**	8,733
Commercial Banks	**(855)**	1,719
Total	**6,038**	10,452

The overdraft is a technical book overdraft relating to the value of unpresented payments as at the balance sheet date. No actual bank overdraft existed at any time.

15. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2006 £'000	*Restated 2005 £'000*
Trade creditors	**8,386**	15,019
Overdraft	**2,802**	3,767
Deferred income	**10,957**	19,961
Taxation and social security	**3,041**	4,188
Accruals	**13,080**	9,875
Other creditors	**6,376**	87
Total creditors: amounts falling due within one year	**44,642**	52,897

There were no creditor amounts falling due after more than one year at 31 March 2006.

The overdraft is a technical book overdraft relating to the value of unpresented payments as at the balance sheet date. The cash to meet these payments was held in the Agency's account with the Office of the Paymaster General. No actual bank overdraft existed at any time.

Intra-Government balances

Intra-Government balances within the totals for creditors are as follows:

	2006 £'000	*Restated 2005 £'000*
Balances with the Department of Health	**2,256**	1,852
Balances with NHS Trusts	**5,836**	5,618
Balances with other central Government bodies	**5,217**	3,657
Balances with local authorities	**998**	52
Total intra-Government balances	**14,307**	11,179

Notes to the Financial Statements
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16. PROVISION FOR LIABILITIES AND CHARGES

	Legal claims	*Future costs of early retirement*	*Agenda for Chamge £'000*	*Total provision £'000*
Provision at 1 April 2005 (restated)	1,958	6,552	2,197	10,707
Reversal of unused provisions	(85)	-	-	(85)
Expenditure made during the year	(233)	(1,483)	(2,112)	(3,828)
Additional provisions	329	3,257	5,000	8,586
Provision at 31 March 2006	**1,969**	**8,326**	**5,085**	**15,380**

The provision for the legal claims comprises several items, the most significant of which relates to a clinical negligence claim the Agency inherited from the Public Health Laboratory Service. Although significant progress has been made during the year to arrive at a settlement, medical assessments continue, and the case remains unresolved.

The provision for the future costs of early retirement consists of the element of the cost in respect of staff that have taken early retirement before the 31 March 2006 that, in accordance with the terms of our pension schemes (note 6), fall on the Agency. The balance in respect of NHS Pensions is £7,182,000 (2005: £6,224,000) and UKAEA, £1,144,000 (2005: £328,000).

The Agenda for Change provision relates to the estimated increase in the non-medical staff costs from 1 October 2004 (1 April 2005 for former staff of the National Radiological Protection Board), the implementation date for the new pay structure for the NHS and related bodies. Actual increases in pay will be based on formal job evaluations which are expected to be completed during the financial year ending 31 March 2007.

17. CAPITAL AND RESERVES

	Government grant reserve £'000	*Income and expenditure account £'000*	*Total £'000*
Balance at 1 April 2005 (restated)	131,543	(7,843)	123,700
Capital grant transferred (note 2)	14,769	-	14,769
Revaluation of tangible fixed assets (note 10)	3,060	-	3,060
Transfer in respect of amortisation (note 9)	(249)	-	(249)
Transfer in respect of depreciation (note 10)	(9,531)	-	(9,531)
Released on impairment of tangible fixed assets	-	-	-
Released on disposal of fixed assets (notes 9 and 10)	(170)	-	(170)
Deficit for the year	-	(2,459)	(2,459)
Balance at 31 March 2006	**139,422**	**(10,302)**	**129,120**

A deficit of £5,314,000 on the income and expenditure account was inherited by the Agency on its establishment on 1 April 2003 and a surplus of £1,558,000 on the Agency's merger with the National Radiological Protection Board. A further £3,257,000 of the income & expenditure account deficit relates to the additional liability inherited from the Public Health Laboratory Service and the National Radiological Protection Board relating to early retirements and redundancies (see note 8). This gives a total deficit of £7,013,000 inherited from the Agency's predecessor bodies.

18. RECONCILIATION OF OPERATING DEFICIT TO NET CASH INFLOW FROM OPERATING ACTIVITIES

	2006 £'000	Restated 2005 £'000
Operating (deficit) for the year	**(7,055)**	(4,645)
Interest received	**(241)**	(118)
Operating (deficit) before interest received	**(7,296)**	(4,763)
Adjustments for non-cash transactions		
Amortisation on intangible fixed assets (note 9)	**249**	103
Depreciation charges (note 10)	**9,531**	9,501
Cost of capital charge	**4,596**	3,752
Loss on disposal of fixed assets	**25**	240
Impairment of assets	**-**	398
Adjustments for movements in working capital other than cash		
Increase in provisions	**4,673**	1,139
Decrease / (increase) in stock	**2,226**	(4,187)
(Increase) in debtors and accrued income	**(749)**	(5,231)
(Decrease) / increase in creditors	**(7,290)**	9,344
Transfer from reserves	**(9,950)**	(9,907)
Net cash (outflow) / inflow from operating activities	**(3,985)**	**389**

19. RELATED PARTY DISCLOSURES

The Agency is sponsored by the Department of Health, which is regarded as a related party. During the year the Agency has had various material transactions with the Department of Health itself and with other entities for which the Department of Health is regarded as the parent entity. These include many NHS and Primary Care Trusts, the Medicines and Healthcare Products Regulatory Agency, the NHS Litigation Authority, the NHS Logistics Authority, and many others.

The Department of Health's 2004 review of its Arm's Length Bodies proposed transferring the management of the National Institute of Biological Standards and Control to the Health Protection Agency, thus allowing for the abolition of the National Biological Standards Board. Subject to the passage of legislation, this is expected to be implemented by April 2008.

In addition, the Health Protection Agency had transactions with other Government departments and Central Government Bodies. These include the Ministry of Defence, the Food Standards Agency, the Department for Environment, Food and Rural Affairs, the Department for International Development and the Medical Research Council.

Notes to the Financial Statements
Continued

19. RELATED PARTY DISCLOSURES CONTINUED

During the year no Board members, members of the senior management or other related parties have undertaken any material transactions with the Health Protection Agency except for:

- Professor Pat Troop, Chief Executive and executive Board member, is also a Board member of the London School of Hygiene and Tropical Medicine, from whom the Agency purchased £282,000 and provided £66,000 of goods and services during the year to 31 March 2006.
- Professor Peter Borriello, an executive Board member, is a member of the Scientific Advisory Committee of Biomerieux, from whom the Agency transacted £1,207,000 of laboratory consumables and equipment during the year to 31 March 2006.
- During the year to 31 March 2006, the Agency paid a total of £56,000 for consultancy and training services provided by the Royal Free Hospital High Security Infectious Diseases Unit of which Dr Barbara Bannister is Clinical Director. Dr Barbara Bannister attends Board meetings as an advisory member.
- Professor David Latchman, a non-executive Board member, has a part-time appointment as Professor of Genetics at the Institute of Child Health, University College London. The Agency transacted £349,000 of goods and services with University College London during the year to 31 March 2006.
- The Agency has a shareholding in Syntaxin Limited (see note 11), and charges the entity for goods and services provided by the Agency. Syntaxin Limited was charged £541,000 for goods and services during the year to 31 March 2006.

20. CAPITAL COMMITMENTS

The contracted capital commitments at 31 March 2006 not provided for in the accounts amounted to £3,632,000 (2005: £3,910,000). There were no other financial commitments at 31 March 2006 (2005: £nil) that require disclosure.

21. COMMITMENTS UNDER OPERATING LEASES

Commitments under operating leases to pay rentals during the year following the year of these accounts are given in the table below, analysed according to the period in which the lease expires.

Obligations under operating leases comprise	*2006* £'000	*Restated 2005* £'000
Land and buildings		
Expiring within one year	**3,338**	3,982
Expiring between two and five years	**617**	58
Expiring after five years	**238**	777
Other leases		
Expiring within one year	**1,852**	2,119
Expiring between two and five years	**379**	362
Expiring after five years	**-**	-
Balance at 31 March 2006	**6,424**	**7,298**

22. FINANCIAL INSTRUMENTS

Financial Reporting Standard 13, Derivatives and Other Financial Instruments, requires disclosure of the role which financial instruments have had during the year in creating or changing the risks an entity faces in undertaking its activities.

Due to the largely non-trading nature of its activities, and the way in which it is financed, the Health Protection Agency is not exposed to the degree of financial risk faced by other business entities. Moreover, financial instruments play a much more limited role in creating or changing risk than would be typical of the listed companies to which Financial Reporting Standard 13 mainly applies. The Health Protection Agency has no powers to borrow, invest surplus funds or purchase foreign currency with grant in aid from the Government. Generally, financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the Health Protection Agency in undertaking its activities.

a) Liquidity risk

The Health Protection Agency has no borrowings and relies primarily on funding from the Department of Health for its own cash requirements, and is therefore not exposed to liquidity risks. It also has no material deposits, and all material assets and liabilities are denominated in sterling.

b) Interest rate risk

The Health Protection Agency is not exposed to significant interest rate risk.

c) Foreign currency risk

The Health Protection Agency has a limited amount of foreign currency expenditure, upon which the currency risk is deemed to be insignificant. The Agency has foreign currency income of approximately £5,000,000 per annum (2005: £5,000,000), upon which there is an element of currency risk.
The only other currency risk is that of a Euro currency bank balance, valued at £179,800 on 31 March 2006 (2005: £129,458), and a US Dollar bank balance valued at £47,883 (2005: £nil). The Agency operates Euro and US Dollar bank accounts to handle transactions denominated in those currencies. This helps to manage potential exposure to exchange rate fluctuations. The fair value of cash is the same as the book value.

For all other assets and liabilities book value represents fair value.

As allowed by Financial Reporting Standard 13, debtors and creditors that are due to mature or become payable within 12 months from the balance sheet date have not been disclosed as financial instruments.

23. CONTINGENT LIABILITIES

As at 31 March 2006, there were outstanding legal claims made against the Health Protection Agency by patients and others. Standard accounting practice requires that provision only be made in the accounts if it is probable that a claim will be successful. The Health Protection Agency's solicitors have estimated that the possible liability arising from those claims for which provision has not been made in the accounts is approximately £34,500 (2005: £11,000) including damages, claimants' costs and the Health Protection Agency's costs. The possibility of any reimbursement, for future payments made by the Agency, are remote.

Notes to the Financial Statements
Continued

24. LOSSES AND SPECIAL PAYMENTS

There were no losses or special payments that require disclosure during the year ended 31 March 2006.

25. MERGER WITH THE NATIONAL RADIOLOGICAL PROTECTION BOARD

a) Background information

On 1 April 2005 the National Radiological Protection Board (NRPB) merged with the Health Protection Agency, forming its new Radiation Protection Division (RPD). RPD consists of its headquarters at Chilton in Oxfordshire, its Occupational Services Department at Leeds, and Radiation and Environmental Monitoring Scotland at Glasgow. Together with the Chemical Hazards and Poisons Division of the Health Protection Agency it forms the Agency's Centre for Radiation, Chemical and Environmental Hazards.

The Director of the Centre is Dr Roger Cox, the former Director of NRPB. The RPD carries out the Health Protection Agency's work on ionising and non-ionising radiations. It undertakes research to advance knowledge about protection from the risks of these radiations; provides laboratory and technical services; runs training courses; provides expert information and has a significant advisory role in the United Kingdom.

Prior to the merger, both entities had a financial reporting year which began on 1 April each year. No consideration was given for the combination of the two public organisations. This business combination has been accounted for using merger accounting principles in accordance with HM Treasury's Financial Reporting Manual, the Accounting Standards Board's Financial Reporting Standard 6. Accordingly, the financial information for the current period has been presented, and that for the prior periods restated, as if the NRPB had been part of the Health Protection Agency throughout the current and prior accounting periods.

b) Merger adjustments

The following merger adjustments have been made to reflect the alignment of accounting policies following the merger:

i) Tangible fixed assets

NRPB land and buildings increased	£5,360,000
NRPB IT equipment reduced	£(353,000)
NRPB merger adjustment	**£5,007,000**

Land and buildings

The Health Protection Agency commissioned the Valuation Office Agency to complete revaluation of all land and buildings, including those of the NRPB, as at 31 March 2005. This work resulted in an increase in the value of NRPB land and buildings by £5,360,000.

IT equipment

The Health Protection Agency fixed asset accounting policies include a capitalisation threshold of £5,000 and limited scope for the grouping of assets. NRPB balances for IT equipment (£248,000) and assets under construction (£105,000) were reduced to comply with the Agency's policy.

ii) Reserves

A transfer of £771,000 from the income and expenditure account reserve to the Government grant reserve was required in order that the Government grant reserve equated to the fixed asset balance as all the fixed assets inherited from NRPB are deemed to be funded by Government grant in aid.

- **Government grant reserve**

Fixed asset grant release	£771,000
Tangible fixed asset revaluation	£5,007,000
NRPB merger adjustment	**£5,778,000**

- **Income and expenditure account reserve**

Fixed asset grant release	£771,000
NRPB merger adjustment	**£771,000**

c) Principal components of the balance sheet for the prior period

An analysis of the principal components of the balance sheet, made by the combining entities for the prior accounting period is as follows:

	NRPB pre-merger £'000	*NRPB adjustments £'000*	*HPA pre-merger £'000*	*Combined post-merger £'000*
Fixed assets				
Intangible fixed assets	-	-	1,184	1,184
Tangible fixed assets	11,725	5,007	113,627	130,359
Investments	-	-	-	-
Total fixed assets	**11,725**	**5,007**	**114,811**	**131,543**
Current assets				
Stock	-	-	6,548	6,548
Debtors	3,953	-	31,041	34,994
Cash at bank and in hand	495	-	13,724	14,219
Total current assets	**4,448**	**-**	**51,313**	**55,761**
Creditors: amounts falling due within one year	**(2,562)**	**-**	**(50,335)**	**(52,897)**
Net current assets	**1,886**	**-**	**978**	**2,864**
Total assets less current liabilities	**13,611**	**5,007**	**115,789**	**134,407**
Provisions	(328)	-	(10,379)	(10,707)
Net assets	**13,283**	**5,007**	**105,410**	**123,700**
Capital and reserves				
Government grant reserve	10,954	5,778	114,811	131,543
Income and expenditure account	2,329	(771)	(9,401)	(7,843)
Total capital and reserves	**13,283**	**5,007**	**105,410**	**123,700**

Notes to the Financial Statements
Continued

d) Principal components of the income and expenditure account for the prior period

An analysis of the principal components of the income and expenditure accounts, made by the combining entities for the prior accounting period is as follows:

	NRPB pre-merger £'000	*NRPB adjustments £'000*	*HPA pre-merger £'000*	*Combined post-merger £'000*
Income				
Government grant in aid	7,221	-	127,871	135,092
Operating income	9,158	-	75,317	84,475
Interest receivable	2	-	116	118
Total income	**16,381**	**-**	**203,304**	**219,685**
Expenditure				
Staff costs	10,729	-	116,954	127,683
Other operating charges	4,842	-	78,449	83,291
Amortisation and depreciation	752	-	8,852	9,604
Total expenditure	**16,323**	**-**	**204,255**	**220,578**
Operating surplus / (deficit) before the cost of capital charge	**58**	**-**	**(951)**	**(893)**
Cost of capital charge	(444)	-	(3,308)	(3,752)
Operating surplus / (deficit) for the year	**(386)**	**-**	**(4,259)**	**(4,645)**
Reversal of cost of capital charge	444	-	3,308	3,752
Surplus / (deficit) for the year carried forward	**58**	**-**	**(951)**	**(893)**

e) Principal components of the statement of recognised gains and losses for the prior period

An analysis of the principal components of the statement of total recognised gains and losses, made by the combining entities for the prior accounting period is as follows:

	NRPB pre-merger £'000	*NRPB adjustments £'000*	*HPA pre-merger £'000*	*Combined post-merger £'000*
Surplus / (deficit) for the year	58	-	(951)	(893)
Unrealised surplus on revaluation of tangible fixed assets	1,671	5,007	465	7,143
Total gains / (losses) recognised for the year	**1,729**	**5,007**	**(486)**	**6,250**

26. POST BALANCE SHEET EVENTS

The provision for the future costs of early retirement within the NHS Pension Scheme referred to in Note 16 has been cleared by a payment paid to the NHS Pensions Agency during May 2006 (£7,182,000).

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