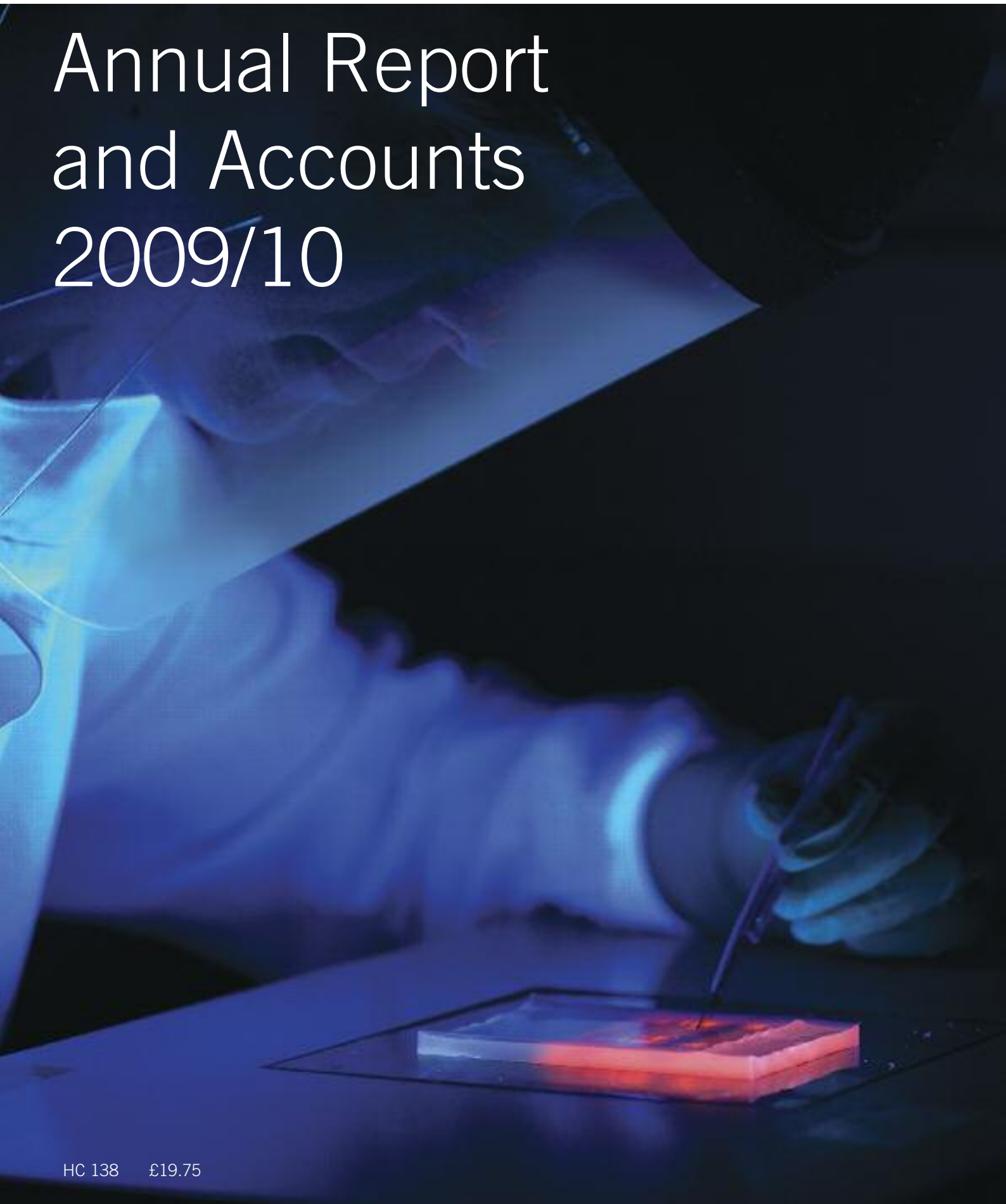
The Defence Science and
Technology Laboratory

[dstl]

# Annual Report and Accounts 2009/10



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Defence Science and Technology Laboratory

# Annual Report and Accounts 2009/10

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Note: on 1 July 2001, in accordance with the Statutory Instrument 2001 No. 1246, the Defence Science and Technology Laboratory (Dstl) was created as a result of the separation of the Defence Evaluation and Research Agency (DERA); Dstl continuing as the Trading Fund.



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# Contents

# Overview

## Who we are

**As an agency of MOD, our role is to maximise the impact of Science and Technology (S&T) for UK defence and security, drawing on the capabilities within Dstl and the wider supply base in industry and academia.**

**As well as delivering directly, we are the agent for the wider S&T community to engage with MOD, including their contribution to research and advice.**

**Our programme of work ranges from S&T support for Urgent Operational Requirements (UORs) in Afghanistan through to policy advice and analysis for senior defence personnel. Our world-class scientists and engineers also deploy to operational theatres to provide advice to troops on the front line.**

**Dstl's expertise is increasingly being called upon to meet wider Government requirements. For example, we are working closely with the Office of Security and Counter Terrorism to shape and deliver the science element of the UK counterterrorism strategy.**

**Where appropriate, we also spin off knowledge for civil applications in a range of areas from liquid repellent coatings for combat clothing through to accelerated wound-healing technologies.**

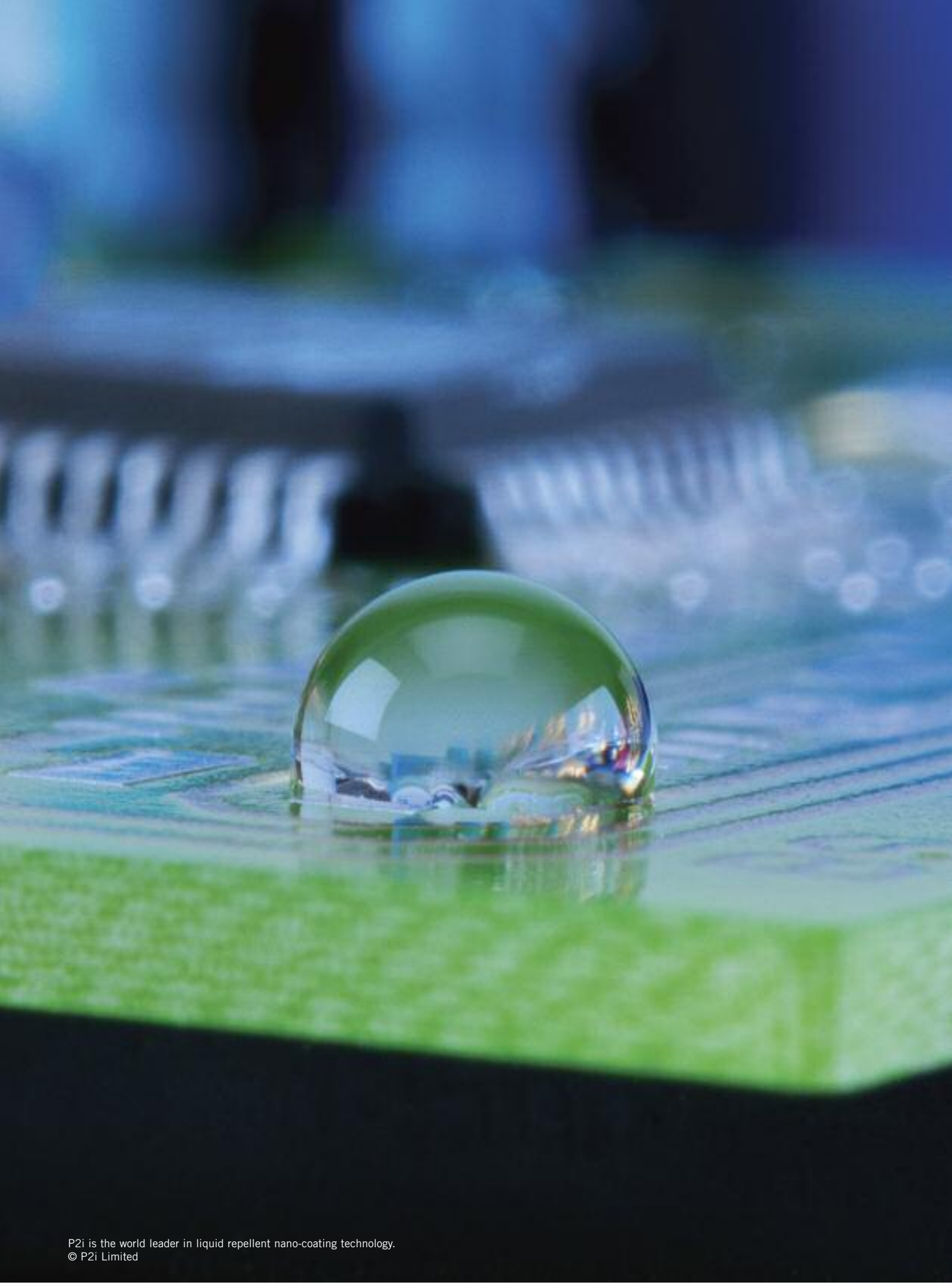
## The work we do

Our work is divided into several categories. We:

- lead the formulation and delivery of MOD's non-nuclear research programme*
- undertake applied scientific research in sensitive areas that need to be kept within Government
- provide independent and high-quality advice and support in areas as diverse as policy formation, equipment development and current in-theatre operations
- undertake horizon scanning to identify and help customers to understand and exploit the opportunities and threats offered by advances in S&T
- transfer knowledge to and from industry and the university sector while supporting the wider S&T community to understand defence requirements
- spin off knowledge for civil applications and undertake collaborative research with other institutions, in accordance with MOD policies.

We do not undertake fundamental research and we do not directly compete with industry for the provision of services to MOD. Dstl exists solely to provide those S&T services that it would be inappropriate to source from the private sector and those activities that must be carried out in Government to sustain MOD's capability to be an intelligent customer and to build productive relationships with suppliers and others.

* Role assumed from 1 April 2010.



P2i is the world leader in liquid repellent nano-coating technology.

# Chairman's statement

This Annual Report shows how Dstl is tackling some of the UK's most demanding security priorities, for example in supporting the Armed Forces in Afghanistan and in its counterterrorism work.

Dstl supports the front line in countering Improvised Explosive Devices (IEDs), contributes to our intelligence effort in respect of this and other challenges, and provides a variety of advisory and analytical services. Dstl staff, embedded with our forces on the ground or working with MOD colleagues in bringing Urgent Operational Requirements (UORs) into service, are integral to the success of our military effort.

At the same time, security is a long-term business. We need, as a country, to be addressing rigorously the risks, threats and opportunities that may emerge and their implications for our strategy and for the size and shape of our Armed Forces and the future defence programme. Scientific and technological change is key to both risks and opportunities. The potential impact of the security risks and the scale of the Government resources involved highlight the importance of being able to call on first-rate research and analytical capabilities.

This report captures some of the contributions made by Dstl in collaboration with partners in government (both in the UK and overseas), universities and industry. Dstl provides science (including social science) and technology services to government in those areas where it is inappropriate to outsource work to the private sector. The breadth of this work is driven by the demands of our government customers. Our aim is to be an agile, forward-looking organisation with world-class people.

As an agency and a Trading Fund, we have a strong focus on efficiency as well as on meeting key customer needs. This can be seen in our financial results. This year, revenues are higher because Dstl has been tackling high-priority operational demands. Costs have been tightly controlled, including successful delivery of the i lab (integrated laboratory) rationalisation programme. I am pleased to report a profit of £20.9 million, which will

help to generate the cash for our capital programme.

Dstl's success depends on the quality and commitment of its people. This year, the Board has been pleased to see encouraging results in the recent staff survey and also Investors in People reaccreditation. In my own meetings with staff, I am always struck not only by their expertise but also by their enthusiasm and pride in the very important work with which they are engaged.

This year has seen some changes to the Board. We have welcomed three new non-executive members – Emma Davies (as the representative of MOD) as well as Elisabeth (Lis) Astall and Jonathan Knowles who both bring top-level, private-sector experience. We have also welcomed two new executive directors – Mark Alexander has joined us as Finance Director and Jonathan Lyle has joined us as Director of the new Programme Office.

Following MOD's major review of the provision of S&T within the defence programme, Dstl has taken on an expanded role from financial year 2010/11. The outcome of the review represents a vote of confidence in Dstl and our Chief Executive, Frances Saunders, and I congratulate her and all of her Dstl colleagues on their achievements in 2009/10.

Sir Richard Mottram
Chairman
24 June 2010

# Chief Executive's statement

The success of Dstl as an organisation needs to be judged against various factors, not just the strength of its financial performance – although you will see from the figures presented in this Annual Report that we have exceeded our initial expectations for the year. Other issues we need to consider include: Did we deliver work for our customers to agreed timescales and costs and to the highest technical standards? Did that work have impact? Was the advice we provided used or was the technology or solution we developed pulled through for exploitation? Have we worked effectively with our sub-contractors and suppliers? Are we attracting and retaining the most talented S&T staff and developing the capabilities that our customers will need in the longer term? Are we also paying sufficient attention to sustainability and the communities within which we work? Overall, we must assess whether our impact on UK defence and security is growing and whether our business is developing in the right way as a consequence. These all are relevant questions to ask of a business such as Dstl, which only thrives if it is judged to be genuinely useful to its customers in Government.

Providing the highest level of professional support to the front line – whether abroad in Afghanistan or in the UK – remains our top priority. The pace of this work is so rapid, and the need to exploit the best ideas is so vital, that Dstl can only deliver if it works ever more effectively with others. We are developing new ways of working with industry and the wider S&T communities. The IED Tiger Team is one example where we have brought together people from across MOD, industry and academia to 'leave no stone unturned' in the search for new ways to counter the IED threat. Our longer-term work programmes also see us exploring new ways of focusing our engagement through established Science and Technology Centres in chemical, biological and radiological defence; cyber and influence, and armour and protection. The intention here is to work ever more closely with other funders and suppliers in the planning, review and delivery of our programmes in these areas.

As an S&T organisation within Government, providing this effective interface with industry, academia and the international community plays a key role in delivering our mission, and indeed the overarching missions and policy agendas of wider Government. We have continued to develop our support and impact on the wider UK security agenda and grown our business again this year as a result.

In parallel with delivering a record level of work, we have completed our rationalisation programme and we are now firmly established in our new and refurbished buildings at Porton Down

and Portsdown West. To celebrate completion of this project, we held official opening events at both sites in October, attended by the Princess Royal (at Portsdown West) and the Earl of Wessex (at Porton Down). Our Royal guests presented campaign medals to Dstl staff who had completed deployments in Afghanistan – a highlight that they and their families will remember for a long time.

The year also saw a major review by MOD's Chief Scientific Adviser of the Critical Interfaces in the S&T research, development and support provided across MOD. The main outcome has been to strengthen Dstl's role as the single S&T delivery organisation for MOD, and the creation of the S&T Programme Office in Dstl to manage MOD's programme. The challenge for the Programme Office will be to reconnect S&T with all of the MOD users and stakeholders (including industry) and bring increasing coherence to all of the work delivered via Dstl, including that for Other Government Departments (OGDs) and our international programmes. There will undoubtedly be challenges ahead in realising the benefits that these new arrangements offer but I am confident that we will rise to the challenge yet again.

Having concluded the i lab programme, I must record that this has been an exceptional period, with hard work from everyone across the organisation to deliver across such a broad front of activity. For me, it is the people and their commitment, enthusiasm and energy that makes working in Dstl such a pleasure, especially when times are tough, and my thanks to all for making this yet another enjoyable and successful year.

Frances Saunders
Chief Executive
24 June 2010

# Business review

## Key Targets

**Performance against Key Targets 2009/10**
Key Targets are agreed by Dstl's Owner, MOD, and laid before Parliament each year. During 2009/10, Dstl had seven Key Targets against which its performance was judged. Most of the targets were met in full.

### **Key Target 1** – Achieved

**Deliver high-quality outputs that have impact on Dstl's MOD customer's 12 benchmark programmes.**

The benchmark programmes illustrate the breadth of Dstl's contribution and represent major areas of work for our customers. They include major equipment programmes such as the Carrier Strike and support to strategic planning as well as counterterrorism and counter-insurgency. Throughout the year, performance against this target has been consistently high with positive comments from senior customers and no major issues arising. Overall performance has been slightly affected by reduced availability of specialist facilities. Successful implementation of business continuity plans meant that the adverse weather conditions during January 2010 had minimal effect on output to customers.

### **Key Target 2** – Achieved

**Dstl will satisfactorily deliver at least 90 per cent of all projects that complete in the financial year 2009/10 to time and to budget.**

Meeting customers' requirements, in terms of working to time and budget, is of critical importance in fulfilling Dstl's mission of creating the winning edge for UK forces. Dstl has achieved 94 per cent of its projects to budget, and 93 per cent to time during the year.

### **Key Target 3** – Achieved

**Maintain the current high level of overall satisfaction with Dstl level of service, with at least 93 per cent of project feedback responses achieving a score of 7 or above for overall satisfaction.**

Customer satisfaction is measured by Dstl to ensure that the quality of its outputs, together with the experience of working with Dstl, meet customer expectations. Information is gathered to inform continuous improvement, and a number of surveys that are tailored to customers at all levels are used to gauge Dstl's performance. Project feedback responses this year have recorded overall satisfaction with Dstl's performance as good, with 94.1 per cent of responses delivering scores of 7 and above (out of 10).

A DstI scientist working alongside British troops in Afghanistan

## **Key Target 4** – Achieved

**Using independent and authoritative experts agreed with MOD's Chief Scientific Adviser (CSA), Dstl will complete a benchmark assessment by external peer review of the national and international standing of 10 key Capability Groups in areas where Dstl leads the work for MOD, with a view to obtaining 'strong' assessments for at least seven out of the 10 Groups and no 'development needed' assessments for any of the 10 Groups.**

Dstl has identified a number of key capability areas where its expertise has to be either world leading or world class. This helps to assure MOD of its intelligent customer status and also provides development and deployment capabilities in specific S&T areas that must be carried out in Government. This year, independent external assessors have carried out reviews on 10 Groups, and 'strong' assessments have been achieved for seven Groups and none have been assessed as 'development needed'.

## **Key Target 5** – Achieved

**Achieve an average Return On Capital Employed (ROCE) of at least 3.5 per cent over the period 2009/10 to 2013/14.**

As a Trading Fund, Dstl is required to deliver a return to provide assurance to HM Treasury that public funds are being used efficiently and cost effectively. The ROCE achieved this year is 9.1 per cent and this performance, together with that predicted for future years, suggests that Dstl is on course to achieve this target.

# Highlights

Dstl has achieved

**94 per cent**

of its projects to budget and

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to time during the year

Overall satisfaction with Dstl's performance was good, with

**94.1 per cent**

of responses delivering scores of 7 and above (out of 10)

Dstl achieved an improved operating profit of

**£20.9 million**

> “Car share and shuttle bus schemes are helping to reduce the carbon footprint due to travel”

## **Key Target 6** – Partially achieved

**Deliver ongoing efficiency savings associated with the i lab programme and other initiatives in line with the Corporate Plan for 2009–14. This will be demonstrated in the short term by delivering the budget loss before interest for 2009/10, while controlling indirect costs and charge rates to customers. Specific targets are:**

- **corporate indirect cost not exceed 35.7 per cent of net income**
- **achieve the budgeted operating loss (£2.3 million before interest) while maintaining an average charge rate that is no higher than 2007/08 in real terms (ie no higher than £64.3/hour).**

This year, Dstl has continued to demonstrate its commitment to efficiency by maintaining its corporate indirect costs at 32.5 per cent of net income. In addition to this, Dstl has achieved an operating profit of £20.9 million, due principally to increased volume of business plus lower restructuring and energy costs. The programme of work throughout 2009/10 has demanded a relatively higher proportion of specialist expertise that is only found in our community of senior scientists. Accordingly, while rates for any given level of expertise are in line with budget, the overall average hourly charge-out rate has been £65.0 – this is £0.7 per hour over target.

## **Key Target 7** – Achieved*

**To embed sustainability and responsible management of information into Dstl's business ethics by:**

- **reducing our total generated waste by at least 5 per cent by the end of 2010**
- **reducing energy-related carbon dioxide emissions from buildings on our core sites by 15 per cent by the end of 2010**
- **establishing travel plans that reduce Dstl's carbon footprint, including reducing single occupancy commuter journeys to core sites by an overall 7 per cent by October 2009**
- **establishing certificated Environmental Management Systems compliant with ISO 14001 at a second Dstl site by March 2010**
- **reviewing and improving the condition of all individual areas within the Dstl estate that may be classified as Sites of Special Scientific Interest (SSSI) by 2010**
- **receiving assurance from internal and external audit that Dstl is operating in accordance with the current Cabinet Office requirements for managing personal and other information.**

Dstl recognises the importance of behaving responsibly in order to ensure a sustainable future. Significant progress has been made towards meeting the target. For example, the amount of waste produced per head has reduced across the year, and the Government's target on carbon dioxide reduction (12.5 per cent) has already been exceeded. Car share and shuttle bus schemes are helping to reduce the carbon footprint due to travel, and Fort Halstead has received ISO 14001 accreditation. The SSSI has been reviewed by Natural England and its overall condition has improved. In managing personal and other information, Dstl has been assessed by MOD's Chief Information Officer as being a performance leader within MOD, and it meets Cabinet Office requirements.

*Two elements to be completed by end of 2010 – hence not yet measurable.

# Key Targets for 2010/11

**1** Deliver high-quality outputs from Dstl-led projects that are assessed externally as impacting on customers' priority issues, including the Research and Development (R&D) Board's priorities.

**2** Deliver at least 90 per cent of all Dstl-led projects that complete in the financial year 2010/11 to time and to budget, and achieve at least 93 per cent of customer feedback responses at a score of 7 or above for overall satisfaction.

**3** Dstl will sustain and develop its technical capability, independently assessing 10 Capability Groups chosen by the R&D Board where Dstl needs to lead thinking either now or in the future. No more than three of these will be assessed as 'development needed'.

**4** Maintain strong business performance through:

- achieving an average ROCE of at least 3.5 per cent over the period 2009/10 to 2013/14
- achieving an annual operating profit of £18.4 million while using the same charge-out rates in 2010/11 as in 2009/10
- non-staff costs not exceeding 32.1 per cent of net income (in accordance with the agreed budget).

**5** Embed sustainability into Dstl's business ethics by achieving and, where these have already been met, exceeding Government sustainable operations targets by:

- reducing carbon emissions from buildings by 15 per cent relative to 2001/02 levels, by the end of 2010/11
- increasing energy efficiency per $m^2$ by 17 per cent relative to 2001/02 levels, by the end of 2010/11
- increasing recycling figures to 80 per cent of waste arisings by 2010/11.

# Customers and markets

Delivering the highest impact to address our customers' most pressing issues remains our top priority and Dstl's support to operations in Afghanistan has continued to dominate our programme of work. We have increased our deployment of scientists, analysts and trial teams to the front line by 50 per cent (to 16 staff) and directly supported MOD's Defence Equipment and Support (DE&S) organisation in the delivery of 46 Urgent Operational Requirements (UORs). We have also brought research projects directly to bear on operations. For example, Dstl and industry scientists have worked with procurement and military specialists to develop novel detection technologies for Improvised Explosive Devices (IEDs).

Defence research funding has grown by around 5 per cent to £226 million (2008/09: £215.4 million). Some aspects of our work, such as the counter-IED programme, have continued to benefit from increased funding to meet UORs but income from other research areas, such as maritime, has been significantly lower.

Our work for DE&S has grown in year and this is evolving further as a result of the Gray review of MOD's major acquisition activities. Income in this area has grown by 13 per cent to £99.9 million (2008/09: £88.3 million). We have built on the success of 'embedding' senior scientists and engineers at DE&S headquarters at MOD Abbey Wood and we have established a joint Dstl/DE&S Closer Working Agreement and improved awareness of the value of S&T support to acquisition decision making. Consequently, we have seen an increase in demand for technical advice, and this is reflected in our work for project teams, such as the high-priority Specialist Vehicle programme. We also continue to work closely with DE&S to develop Through Life Capability Management (TLCM) across all procurement activities.

In the past year, we have provided analysis in support of evidence-based thinking and decision making for the recent Green Paper on defence as well as the accompanying Global Strategic Trends and Future Character of Conflict documents. We are now conducting preparatory work to support the forthcoming Strategic Defence and Security Review.

Our support to Defence Intelligence has grown by 41 per cent to £27.9 million in year (2008/09: £19.7 million). For example, we have greatly expanded the Defence Exploitation Facility at our Fort Halstead site, supporting operations at home and abroad, and we continue to provide pan-Dstl validation, verification and subject-matter expertise to intelligence assessments on platforms, systems and capabilities.

Dstl is increasingly being called upon to deliver S&T support across Government. We have worked closely with the Office of Security and Counter Terrorism to shape and deliver the science element of the UK counterterrorism strategy (CONTEST). This year also saw an 8 per cent increase in our work for Other Government Departments (OGDs) with a continuing emphasis on transport and aviation security, the protection of crowded spaces and bio-forensics. Our overall income from OGDs was £30.4 million (2008/09: £28 million).

Finally, we continue to undertake a significant amount of work for foreign governments. Such work is always undertaken with MOD agreement, supporting UK policy and delivering a defence benefit. For example, we have teamed up with industrial collaborators to obtain licences for plague and anthrax vaccines in support of US government programmes. This work helps to share the cost of mutually beneficial research while maintaining vital capability required by MOD.

## Examining the explosives

The majority of casualties to our forces in Afghanistan are caused by IEDs. Valuable information can be derived by examining these devices and this is a growing area of Dstl's work.

In view of the rapidly increasing use of IEDs, Dstl staff have expanded their examination capability – from analysing 60 devices a month in early 2009 to more than 480 a month in January 2010. To achieve this huge capacity increase, Dstl has rapidly commissioned new laboratories and trained many staff in the painstaking work of technical examination. Several staff have completed deployments to Afghanistan, working with military personnel on the ground.

The information produced from the captured IEDs feeds into many areas of the countermeasures campaign. This includes improved methods for the detection of IEDs and new ways to make them safe once found.

## Tiger team success

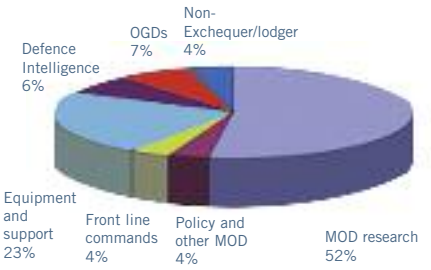
The IED Detect Tiger Team was formed to explore all possible solutions – including technology, sensors and training-based options – to assist the detection of IEDs in Afghanistan. The team was created to provide a timely and time-bounded (12-month) S&T focus in this area, bringing together representatives from MOD S&T, DE&S, the military and UK industry to assess and deliver front-line capability.

The team carried out extensive experimentation and trials across the UK and internationally (in Jordan and Afghanistan) to demonstrate the viability of four exploitable solutions, which are being transitioned to DE&S for final development and procurement. A further three promising technologies are being pursued in this year's research programme.

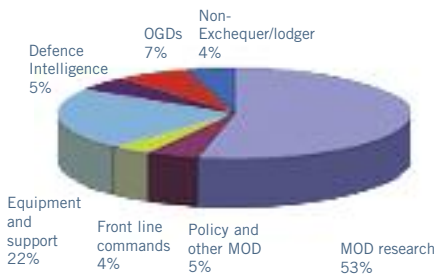
In addition to enhancing front-line capability, the successful approach applied to the IED Detect Tiger Team will inform MOD's ongoing research programme, exploitation of current and future S&T and industry development activities, and future pan-Dstl collaborative endeavours.

## Dstl income by market

2009/10




2008/09




Figures based on funding source

> This work has drawn on the combined expertise of Dstl scientists from Land Battlespace Systems and Air and Weapons Systems Departments to deliver a scientifically-proven solution within just six months.

# Operations review

Customers look to us to maximise the impact of S&T on UK defence and security. Dstl's work for its main MOD customer accounted for 89 per cent of income in 2009/10. Overall levels of income rose 7.4 per cent to £435.3 million (2008/09: £405.2 million), principally as a consequence of support for current operations in Afghanistan and counterterrorism work.

Delivery of customers' programmes is managed principally across 12 operating Departments. Each programme draws on the expertise of pan-Dstl teams to deliver integrated solutions for our customers. Set out in this section is an overview of key operational highlights for the year.

## Air & Weapons Systems

- delivered complex analysis and technology assessments that are shaping decision making in relation to the UK's current and future air power capability and directly contributed to major decision points on future UK air power aircraft options (US Joint Strike Fighter and Typhoon)
- worked in partnership with industry on the Hostile Fire Indication and Low Visibility Landing research programmes to increase the survivability and operational safety of rotorcraft on the front line.

## Biomedical Sciences

- provided vital support to operations, including rapid analysis of casualty trends, advice on personal protection in theatre and assessment of medical strategies for treatment of battlefield casualties
- delivered a new 'less than lethal' weapon concept that fulfils a key recommendation from the independent report on policing in Northern Ireland
- played a leading role in the licensing of chemical and biological medical countermeasures, including the UK ricin and botulinum anti-toxin programmes and the US plague and anthrax vaccine programmes.

## Detection

- took part in a groundbreaking programme in partnership with the Department for Transport to understand the impact of chemical, biological or radiological attacks on underground railway networks
- combined innovative mathematical models with experimental tracer studies to develop a sophisticated computational model that describes complex internal airflows within underground railways.

## Environmental Sciences

- conducted 350 days of trials to develop protection against IEDs – primarily to test prototype equipment
- solved a major operational deficiency within 48 hours on a nuclear submarine due to deploy
- conducted work on behalf of DEFRA to identify capability gaps and potential solutions to deal with the consequences of a wide area hazard from a chemical, biological or radiological terrorist incident

## Novel camouflage solutions

UK Armed Forces in Afghanistan are operating on a wide range of terrains, including desert, mountainous and urban areas as well as the green zone*. This can create challenges in terms of keeping soldiers camouflaged for long periods during ambush operations or out on patrol. Dstl scientists, working with MOD's Defence Clothing Project Team, have developed novel Multi-Terrain Pattern (MTP) camouflage clothing that has been proven to enhance mission effectiveness and is now being issued to UK forces. Dstl developed colour specifications using photographs of various landscapes in Afghanistan. Seven new camouflage patterns were trialled against Afghanistan reference backgrounds identified by the Dstl team in collaboration with military advisers. The patterns were compared against current in-service camouflage.

Initial trials focused on detection speed and probability. Soldiers also ranked how well close-up images of the suits performed against the backgrounds. They were asked to indicate their preferences and the potential effectiveness of an MTP. The results showed that Crye Precision's Multicam® performed best across all the trials. The chosen solution was to use the colour specifications of Multicam® but in a pattern that had clear echoes of the well-known British 'splash' pattern. The new MTP was subsequently approved by MOD and the camouflage was being issued to troops in March 2010. The UK is the first nation to formally adopt an MTP camouflage, and it will become the standard issue to all British Forces. This work has drawn on the combined expertise of Dstl scientists from Land Battlespace Systems and Air and Weapons Systems Departments to deliver a scientifically-proven solution within just six months.

*The more fertile cultivated farmland and wooded areas around the villages

- designed a combined neutron, photon and beta radiation dosimeter introduced to support the naval nuclear propulsion programme. This new unit offers both improved neutron response and decreased logistical burden.

## Information Management

- successfully hosted the Coalition Warrior Interoperability Demonstration (CWID) in June 2009. The event, which involves the UK, US, Canada, New Zealand, Australia and other countries, is designed to improve interoperability within the Afghanistan conflict
- supported front-line commands to understand the issues faced with information management. Working with complex data, the Department successfully identified improvements to be rolled out over the next year
- conducted analysis work to support the Apache Helicopter safety case
- provided direct support to theatre on issues ranging from nutritional analysis and advice for troops through to trials designed to understand and reduce the IED threat.

## Joint Systems

- conducted a major study to determine whether a change of approach is needed to maintain military capability through training. Identified key areas where changes to the delivery of the training enterprise could make a significant impact on UK defence capability
- took a leading role in a major new initiative to support implementation of the Network Enabled Capability (NEC) concept. This will ensure the development of coherent, cost-effective solutions to network and spectrum management issues. This is an important step forward in realising the NEC concept.

## Land Battlespace Systems

- provided expert technical advice and analysis to support MOD's decisions on its largest Armoured Vehicle procurement programmes
- designed, evaluated and selected new camouflage clothing for the British Army serving in Afghanistan now in use on the front line (see above).
- led the analytical contribution to a US-led technology demonstration aimed at combat identification solutions to reduce casualties caused by friendly fire.

## Naval Systems

- provided analysis of survivability, force generation and capacity to support procurement of Royal Fleet Auxiliary Tankers – directly influencing the requirements for the future tanker fleet
- established a pioneering approach to the design and build of wide-band electronic surveillance systems – demonstrating the ability to address equipment shortfalls and achieving substantial cost reductions (see page 19). A variant of this technology will be in service with the Royal Navy in 2011

- challenged established thinking for future anti-submarine warfare capability – generated alternative concepts to provide a groundbreaking model of how MOD should consider future capability and procurement.

## Physical Sciences

- actioned UORs to upgrade armour protection for 16 vehicles and five helicopters deployed in Afghanistan
- developed a computerised tool, jointly funded by the UK and US, to enable the most effective positioning of sensors to warn of a chemical or biological attack. The tool is now available for use in 139 tri-service US bases and available to provide 24-hour support for UK military operations and civilian users
- completed the first stage of a major programme that will significantly reduce the weight of power and protection equipment for the infantry soldier. Technology demonstrators will be delivered in the next 12 months.

## Policy and Capability Studies

- provided high-level, evidence-based decision support to MOD – including direct support to MOD's strategic decision making for the recent Green Paper, work on the emerging areas of cyber and influence activities and preparation for the Strategic Defence and Security Review
- led the flagship Strategic Balance of Investment study to enable informed choices on capability options based on their relative cost and effectiveness.
- conducted work for the Home Office on the public perceptions of recent counterterrorism legislation
- provided analysis support and cultural advice to current operations, headquarters and warfare centres in the UK, including the deployment of 100 staff to Afghanistan, Iraq and Bahrain and direct support to the Surgeon General on casualty timelines.

## Security Sciences

- conducted a broad range of support to operations from technical intelligence through to UORs. Working closely with UK industry to develop more advanced capabilities to keep pace with the evolving threat. This includes pyrotechnics for air platform protection to ensure that aircraft in Afghanistan are protected against the threat from missiles
- deployed staff to Afghanistan in direct support to operations.

Explosive forensic scientists have also provided expert evidence to support investigations.

## Sensors and Countermeasures

- developed world-leading enabling work on antenna systems to protect GPS receivers from jamming – applicable to high-value platforms requiring the ultimate in protection and to miniature, low-cost antenna systems for use on small Unmanned Aerial Vehicles
- provided support to UORs, which has maintained UK capability for 20 military aircraft types. Provided advice to the Air Warfare Centre, front-line commands and five other NATO nations – vital in protecting aircraft crews and passengers in operational theatres
- conducted research and live demonstrations of the hazard to human eyes from the malicious use of handheld lasers
- developed TELESTO – a ship-tracking system that uses a diverse array of data sources to construct a maritime situational picture. This provides a key source of maritime information for the Royal Navy and forms the technical foundation for the new National Maritime Information Centre.

## Making a splash

Dstl has pioneered a groundbreaking electronic surveillance receiver for ships that is attracting global interest.

The design, developed by Naval Systems Department, is based on photonic sampling of microwave signals and direct digitisation of the environment. The demonstrator system, which has been built by Thales UK, has been undergoing evaluation using radar signals in the Solent and it has demonstrated very significant performance benefits compared with its in-service counterpart, the UAT system* .

The new receiver addresses emerging performance shortfalls of current equipment in the littoral environment. It also offers the potential for very significant cost reductions in both acquisition and support through the use of modern digital processing technology in a regular and modular architecture.

This project has generated significant industry private venture funding and offers a unique and prestigious offering into the market. A variant of the technology, using electrical sampling technology over a smaller frequency band, is planned to enter service with the Royal Navy in 2011. The approach used on this project is likely to become a template for the design and build of future wideband electronic surveillance systems.

The US Navy has also expressed an interest in using this technology solution.

*The existing fleet electronic surveillance equipment.

# Technology transfer

Exploiting the value of defence research within the wider economy helps to deliver the maximum value both to MOD and the UK taxpayer and it is a key element of Dstl's strategy.

## Repellent success

Liquid repellent treatments for combat clothing developed by Dstl scientists protect military personnel from chemical attack while maintaining comfort, flexibility and operational effectiveness. P2i, a company formed specifically to commercialise this liquid repellent nano-coating technology, is now the world leader in this field.

P2i's revolutionary nano-coating process dramatically reduces the surface energy of a material, so that when liquids come into contact with it, they form beads and simply roll off. This enables P2i's customers to improve dramatically the performance of their products by protecting them from the effects of water and all other liquids, without affecting the look or feel.

Now employed on both a commercial and industrial scale, P2i's patented process has been successfully applied to a wide range of products in a variety of markets that include lifestyle, electronics, life sciences, energy and filtration and military and institutional.

Ploughshare Innovations Ltd, Dstl's wholly owned technology management company, was formed to exploit the laboratory's Intellectual Property in non-defence markets. Through licensing, spin-out and joint venture deals, the company has spearheaded the commercialisation of a wide range of technologies. Applications range from blast mitigation and liquid-repellent coatings, through vaccines, microbial detection systems and wound healing, surveillance and communications systems, to tuneable acoustic reflectors for sub-sea industries.

The past year has been an eventful one for Ploughshare with the appointment of a new Chief Executive. This has resulted in a new corporate structure, bringing clarity to functional responsibility and a sharpened focus on the scale and earlier realisation of deal value.

Results are encouraging. During the year, Ploughshare's income from all sources was £1.1 million, well over budget.

Ploughshare has also increased its international links to broaden technology investor access. Highlights include a contractual arrangement with CIP Technology Partners LLC – a Japanese firm specialising in introducing non-Japanese technologies into the country. Talks have also been held with Techlink, an organisation funded primarily by the US Department of Defense (DoD) to link companies with DoD laboratories for technology licensing/transfer and research.

Identifying future exploitation opportunities is a crucial element of Ploughshare's work. During the past year, a total of 29 new granted patents joined the strengthened patent portfolio. By the end of the financial year, Ploughshare had access to 154 patent families across Dstl – believed to be the largest portfolio of any Government department laboratory. A total of 17 Dstl inventors and support staff were paid awards totalling £31,700 under the Dstl-Ploughshare Rewards to Inventors Scheme for successful commercialisation.

| Dstl patenting results for 2009/10 | |
|---|---|
| New patent applications filed | 18 |
| Patent applications published | 47 |
| Patents granted | 29 |
| Number of Dstl inventors rewarded for patent filing or successful grants | 20 |
| Total rewards paid by Dstl to the above for their patenting success | £7,675 |


Liquid repellent coatings have applications in the footwear and performance textile markets.
© Hi-Tec

# Financial review

Dstl achieved an operating profit for the year of £20.9 million, reversing the previous year's loss (2008/09: £(3.8) million). The improvement in profit reflects a 7.4 per cent increase in Group turnover to £435.3 million (2008/09: £405.2 million) and a 1.3 per cent reduction in operating expenses to £291.8 million (2008/09: £295.7 million).

## Turnover

Dstl has continued to trade well with an increase in turnover of £30.1 million. Sales to MOD grew by 7.5 per cent and accounted for 89 per cent of total sales (2008/09: 89 per cent).

| £ Million | 2009/10 | 2008/09 |
|---|---|---|
| MOD: | | |
| Research | 226.0 | 215.4 |
| Non-research | 159.9 | 143.5 |
| | 385.9 | 358.9 |
| Non MOD: | | |
| OGDs | 30.4 | 28.0 |
| Non-Exchequer income | 18.8 | 18.1 |
| Royalty income | 0.2 | 0.2 |
| | 49.4 | 46.3 |
| **Total** | 435.3 | 405.2 |

Improved performance was driven principally by Dstl's support for MOD's highest priority – supporting operations in Afghanistan. This included conflict prevention funding, paid for through MOD's Research Programme, which increased by £10.6 million, for work on countermeasures to IEDs, improved armour protection and hostile fire indication. MOD non-research funding increased by £16.4 million, which included an increase in income from DE&S of £11.6 million to £99.9 million (2008/09: £88.3 million), in part to meet UORs. In addition, income from Defence Intelligence increased by £8.2 million to £27.9 million (2008/09: £19.7 million) for management of the UK Defence Exploitation Facility, which was set up to investigate material recovered from IEDs.

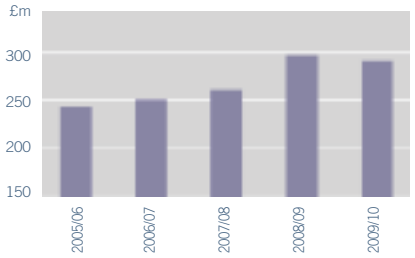
## Cost of sales

Cost of sales was £122.6 million (2008/09: £113.3 million), representing 28 per cent of turnover, unchanged on the previous year. Cost of sales includes work placed with outside contractors, and the purchase of materials and equipment paid for by customers.

## Operating expenses

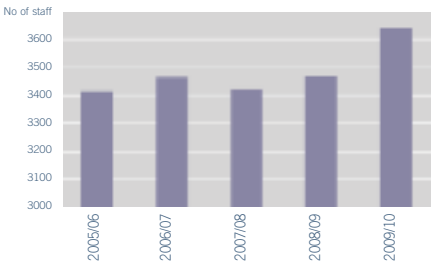
Operating expenses have decreased by £3.9 million to £291.8 million (2008/09: £295.7 million), principally due to completion of the i lab programme.

Trend in operating costs




Staff costs increased by £7.9 million to £164.3 million (2008/09: £156.4 million), a consequence of an increase in average headcount of 168 to 3636 (2008/09: 3468) to enable Dstl to meet strong customer demand. Staff costs accounted for 57 per cent of operating expenses (2008/09: 53 per cent).

Average number of persons employed




Other changes to operating expenses include a reduction of £6.8 million in relocation costs associated with completion of the i lab programme, as Dstl reduces from nine to three core sites, to £7.2 million (2008/09: £14.0 million), and an increase in depreciation of £3.9 million to £12.1 million (2008/09: £8.2 million) as a consequence of Dstl's significant capital investment programme.

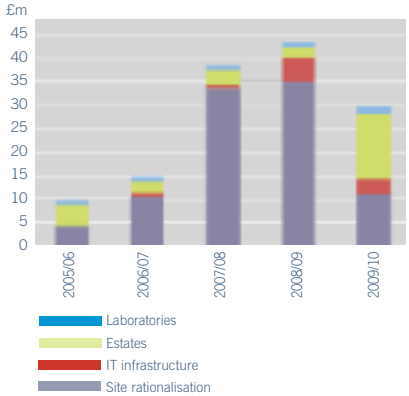
## Ploughshare Innovations Limited

Ploughshare is Dstl's wholly owned subsidiary set up to transfer technology into non-MOD markets. During the year, the company rebalanced its work away from long-term investment in joint ventures towards putting licence arrangements in place. Turnover was maintained at £1.1 million (2008/09: £1.1 million) and its operating loss was maintained at £(0.7) million (2008/09: £(0.7) million). A number of its joint ventures are moving towards maturity that would enable the company to eliminate its debt balance with Dstl of £3.3 million (2008/09: £2.4 million).

## Capital investment

Capital investment remained at a high level, relative to depreciation, at £28.8 million (2008/09: £43.8 million).

Trend in capital investment




Investment in site rationalisation reduced to £11.2 million (2008/09: £35.0 million) as Dstl completed its i lab programme, including a major office refurbishment at Portsdown West. Other significant investments included £0.8 million for creation of high-performance computing facilities at Portsdown West and £7.7 million to refurbish effluent treatment plant for bio-containment facilities at Porton Down.

## Capital and reserves

Capital and reserves have increased by £10.2 million to £231.7 million (2008/09: £221.5 million). Retained earnings have grown by £16.7 million to £148.6 million (2008/09: £131.9 million). This has been offset principally by a reduction of £7.8 million in revaluation surplus to £31.4 million (2008/09: £39.2 million), due to a revaluation of land and buildings at Porton Down by GVA Grimley Limited, Chartered Surveyors.

> The increase in cash reflects Dstl's strong trading performance offset by significant capital investment. Dstl's ongoing investment programme will be funded from internally generated cash and prioritised according to business need.

Mark Alexander, Dstl Finance Director

## Funding and treasury management

During the year, Dstl drew down £10.7 million against its loan facility with MOD, bringing the loan to a final total of £32.2 million. Dstl was re-financed with a loan facility in 2008/09 following payment of a special dividend of £25 million to MOD in that year. The loan will be repaid in 20 equal six-monthly instalments up to March 2020. Interest on the loan is charged at an average rate of 3.9 per cent.

Dstl ended the year with cash balances of £40.3 million (2008/09: £30.4 million). The increase in cash reflects Dstl's strong trading performance offset by significant capital investment. Dstl's ongoing investment programme will be funded from internally generated cash and prioritised according to business need.

Dstl operates a centralised treasury function that monitors cash flow and future cash requirements on a daily basis. Funds not immediately required for operational purposes are invested with HM Treasury-approved institutions. Dstl is not permitted to have an overdraft facility and consequently aims to maintain a minimum cash balance of £10 million.

Dstl's policy is to minimise foreign exchange rate exposure as far as possible by negotiating contracts in sterling. Contracts that are denominated in foreign currency usually allow for price revision if exchange rates vary by more than 2.5 per cent.

## Credit payment policy and practice

Payments to suppliers are within Government guidelines and comply with the requirements of the Late Payment of Commercial Debts (Interest) Act 1998. During the year, Dstl paid 96.8 per cent of approved invoices within the agreed credit period on receipt of an undisputed invoice or date of confirmation of receipt of an acceptable service. This figure reflects adoption of Government policy to pay undisputed invoices within 10 days with effect from 1 August 2009.

## Dividends

A total dividend of £4 million will be paid in respect of 2009/10 (2008/09: £3 million). This comprises an ordinary dividend of £3 million and a special dividend of £1 million, reflecting Dstl's strong performance. Future dividends are expected to be based on Dstl's Return On Capital Employed (ROCE) target, currently 3.5 per cent.

## Significant events after the balance sheet date

There have been no significant events since the end of the financial year that affect the results for the year, or the year end balance sheet.

## Accounting policies

These accounts have been produced under International Financial Reporting Standards (IFRS), in accordance with the HM Treasury's announcement in March 2008 that the Public Sector would adopt IFRS in 2009/10. Accordingly, prior year numbers have been restated. The only significant changes, other than presentational, are to capitalise software within intangible assets with a net book value of £2.6 million and to include an accrual for outstanding holiday pay of £5.7 million at 31 March 2010.

## Outlook

Dstl has made a confident start to trading in 2010/11. It is building on the success of the i lab programme with an ongoing drive to improve further business efficiency and value for money. It is particularly important that Dstl continues to improve business resilience so that it can adapt to any changes in priority that may result from the Government's anticipated Strategic Defence and Security Review.

## Beating the brownouts

Helicopters can face serious environmental difficulties when flying in desert, arid conditions, such as those experienced in Afghanistan. Pilots can experience reduced visibility on landing and take-off due to re-circulating dust and sand particles – a phenomenon known as brownout. In recent years, there has been a noticeable increase in accidents and incidents when conducting low visibility landings, which has been primarily attributed to brownouts.

Dstl was tasked, in conjunction with AgustaWestland, to identify a technology solution that could be matured in short timescales to address the spatial disorientation issues associated with brownouts. Dstl's air and weapons experts assessed a range of options, identifying a solution based on 'conformal symbology'. Presented on a helmet, this technology provides a virtual 3D representation of the landing zone that stays fixed to the earth as the pilot approaches. This gives the pilot all the relevant information needed to judge the speed, rate of closure and drift to replace real-world cues obscured by dust.

The Dstl/industry team has conducted four flight trials and two simulator trials to test the technology. This culminated in groundbreaking flight trials on a head-mounted conformal symbology system in June 2009. This work is an excellent example of the successful application of analysis and technology to bring forward systems solutions to address significant challenges. The technology has now been matured to a level where it could be further investigated under a suitable development programme.

Following this success, the team plans to apply this approach to address the detection of obstacles in the brownout cloud as well as providing ongoing support to MOD in any follow-on development work.

# Our external networks

Delivering the greatest impact to our customers' highest priority issues is reliant on our ability to harness leading-edge thinking from across and beyond Dstl.

The increasing internationalisation of the global threat to defence and security, coupled with the rapid pace of progress in S&T, creates challenges at a time of growing pressures on defence spending. We are increasingly looking to share resources with industry, universities and other government laboratories and harness the fruits of relevant research more widely. Rising to this challenge, we have now appointed a Strategic Relations Director to drive forward our strategy in this area (see page 46).

Over the past year, our relationships with academia and industry have continued to flourish. We now have productive engagements with more than 50 UK universities and a broad array of industrial organisations.

We have, for example, an important role to play in linking industry with academia through the emerging Centres for Defence Technology. These centres are set to make very significant contributions to developing and facilitating the exploitation of important technology and capabilities for defence. As an example, the new Dstl-led Cyber & Influence Science and Technology Centre brings together relevant parties from industry, academia and wider Government to address the threats posed by cyber attack and maximise the exploitation of influence capability. We are also leading centres in the areas of chemical and biological defence, and armour and protection (see case study right).

Increasingly, Dstl's expertise is being applied to address wider Government priorities and we currently work with more than 30 Other Government Departments (OGDs) on a range of projects. For example, we are working with the Department of Health on a new tool to diagnose sepsis before symptoms develop. This pioneering technology will offer benefits in both the defence and civilian sectors and it has attracted significant interest, and funding, from the US Government.


## Dazzling defence technologies

A new lightweight, textile-based vehicle armour system that provides protection against Rocket Propelled Grenades (RPG) has been pioneered by Dstl and industry. TARIAN, which has been developed by Dstl and AmSafe Bridport, is half the weight of aluminium Bar Armour – yet equally as effective. The weight saved can be used either to provide additional mine blast protection or to carry more ammunition and supplies. Due to its low weight, TARIAN can be used to provide RPG protection for those vehicles unable to carry the weight of Bar Armour. It is for this reason that TARIAN was applied to Heavy Equipment Transporter (HET) vehicles operating in Afghanistan in 2009.

Dstl's role was to identify the potential for the technology and work closely with the manufacturer to optimise the system through trials. Development of the new system was carried out as part of Project PARSIFAL – Dstl's accelerated armour protection programme. This programme, which draws on expertise from across MOD and industry, brings through new armour solutions from research into operational service quickly. PARSIFAL has so far contributed to the fulfilment of 21 UORs.

Advanced armour protection developed through the PARSIFAL programme has been credited with saving the lives of soldiers on operations in Afghanistan and Iraq.

## Armour centre opens its doors

Building on the success of Project PARSIFAL, Dstl launched the Armour & Protection (A&P) Science & Technology Centre (STC) in October 2009. The centre has significantly greater scope than Project PARSIFAL, operating across land, sea and air domains and across the entire equipment programme – not just UORs.

Work within the A&P STC ranges from research through to the development of engineered protection equipment with key input from industry and academia. So far, the centre's activities have included several workshops looking at the fundamental physics associated with impact and blast attack and protection techniques as well as valuable networking events.

A call for novel and innovative proposals attracted a significant number of excellent proposals, resulting in more than £500,000 of contracted programmes. Importantly, the MOD-funded work is being supported by very significant contributions of private venture funding from industry.

The centre is playing an important role in bringing together the relevant experts from industry and academia, which is vital to maintain a suitable technology base, and to deliver protection schemes to a wide range of users.

Working with overseas governments will prove increasingly important as we seek further to share the costs and benefits of defence and security developments with our international allies. As an example, we are working with counterparts in France and the US to develop the concept of peelable coatings that have self-decontaminating properties (see page 50). We have also worked with other NATO countries to agree methods and standards for sharing Intelligence, Surveillance and Reconnaissance (ISR) data amongst allies in an operational environment. This addresses fundamental issues such as how ISR data gathered by an 'unmanned drone' belonging to one nation's forces can be sent to, and used with confidence by, another coalition nation. This is providing significant benefits for coalition collaboration in Afghanistan.

Many of our productive relationships in the UK and abroad have been fostered over years of collaborative work. We are now focusing on the strategic co-ordination required to enhance these networks and help us to build enduring relations that truly add value to defence and security.

# Our people

Our success is critically dependent on our people who contribute through their knowledge and expertise, the quality of their thinking and innovation, their ability to deliver work on time and to cost, and their willingness to go the extra mile for customers.

The value we place on our staff has been reflected in our recent re-accreditation to 'Investors in People'. Managers have been working closely with their teams to create an environment where people can succeed and bring the Dstl Principles to life. One of these Principles is trust, and the latest staff survey results show that more than 90 per cent of our people feel both trusted to get on with their work and trust their colleagues to do a good job.

We understand the importance of staff engagement to achieving organisational performance. Our people value good development opportunities, excellent leadership, empowerment and teamwork. This year, our people rated Dstl really well in these areas with a staff engagement score of 76 per cent, which far exceeds the public and private sector norm.

During 2009/10, we successfully recruited 454 people, and we had an overall average headcount of 3623*. Welcoming new people into Dstl is vital to sustain our capabilities. This year, we have introduced a new induction programme that takes new starters from the job-offer stage through the first few months of working in Dstl.

*For the Trading Fund.

In October, we completed our relocation programme, which saw 1350 people move site. A total of 260 permanent people left Dstl during the year, which includes an exceptional figure of 60 staff who took redundancy as a result of our site rationalisation.

Career development is a key priority and 370 people achieved a promotion in 2009/10. Our 'Fellowship' programme provides a path to senior levels in the organisation for technical staff. This year, two people were awarded the highest level of Senior Fellowship and five people were awarded Fellowship, bringing the total to 11 and 26 respectively.

We have invested significantly in leadership development, which has contributed to a 16 per increase in staff confidence in management. More than 70 per cent of managers have now attended the 'New Challenges of Leadership' programme, which has earned two external training awards for Dstl and its training provider, Criterion.

Staff secondments provide an excellent way to develop staff with an all-round knowledge of defence. In 2009/10, 120 people took part in secondments to industry, OGDs and wider MOD. This is an increase of 20 per cent from previous years. We also welcomed 50 inward secondees.

This year, we have worked with the Trades Unions (TUs) to finalise a new simplified pay approach aimed at better rewarding high performance. We gained Treasury approval for the pay system and we were able to implement most elements of this new approach and the pay deal in January. We plan to bring in the final elements in 2010.

Health, safety and wellbeing remains of paramount importance. We have worked hard to enhance safe working across the organisation and our regulators have consistently indicated that Dstl's approach is sound and, in some cases, 'best in class'. Our recent 'safety culture' survey has identified some areas for improvement, which we are seeking to address.

During the past year, an average of 5.3 days were lost to sickness, which is considerably lower than the UK norm of 7.5 days. Our sickness absence pilot focusing on 'return to work' interviews has helped to reduce absence by 28 per cent and saved £70,000.

# Statement by Dstl Trades Unions

This has been a challenging year for staff, particularly those who have relocated, which has impacted on morale in some areas and continues to generate a heavy workload for Trades Unions (TU) representatives. In this context, the TUs continue to engage constructively with management, raising issues of importance to our members.

## i lab

The major relocation of staff, as part of the i lab site rationalisation programme, has affected many TU members, which has led to increased stress for many individuals. TU representatives lent their support to groups and individuals to help smooth the process and sought to match individuals' aspirations with Dstl's business needs. For some individuals, a number of significant issues are yet to be resolved.

## Chief Scientific Adviser (CSA) review

Following the announcement of CSA's review, the TUs have engaged actively and positively with the review team. The TUs warned that the timescales and issues would be very challenging, which is now proving to be the case. The TUs have provided support to members affected by the creation of the new Programme Office.

## Employee relations

The Consultative Forum continues to provide useful opportunities for the TUs to engage with the Chief Executive, the Chairman and other members of the Executive Committee on key issues. The Joint Negotiating Forum has continued to provide a good basis for frank discussions with management, although there is still room for improvement. This year has seen a number of staff-related changes to processes as part of the major simplification of the Dstl Management System. The level of consultation with the TUs on these changes has been encouraging and we have been pleased to engage constructively.

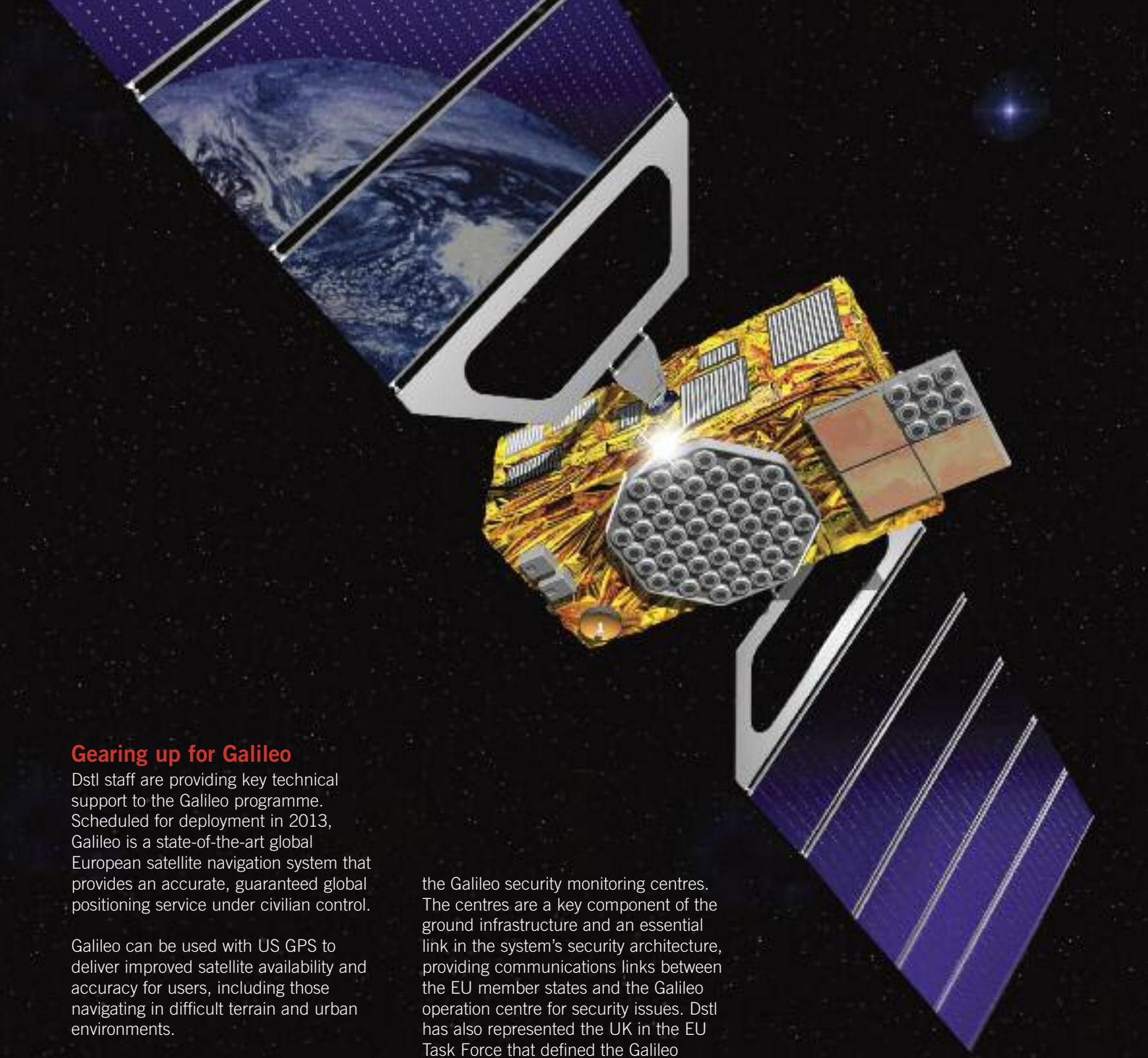
## Pay

This year saw the implementation of the new pay system. Negotiations on the implementation and transition arrangements became somewhat disjointed and some points of disagreement emerged, which were resolved after frank discussions. Members subsequently voted to accept the one-year settlement.

## Health and safety

The TUs play an important role in helping Dstl's management to maintain a safe working environment through consultative fora, investigations and workplace inspections. Despite the efforts of senior management, some examples of safety representatives not being invited to participate in safety inspections are still being seen. The need to improve the safety culture is a challenge for both managers and staff and we continue to contribute to improved practices.

"The Consultative Forum continues to provide useful opportunities for the TUs to engage with the Chief Executive, the Chairman and other members of the Executive Committee on key issues."



## Gearing up for Galileo

Dstl staff are providing key technical support to the Galileo programme. Scheduled for deployment in 2013, Galileo is a state-of-the-art global European satellite navigation system that provides an accurate, guaranteed global positioning service under civilian control.

Galileo can be used with US GPS to deliver improved satellite availability and accuracy for users, including those navigating in difficult terrain and urban environments.

Working with the Department for Transport's Galileo Unit, Dstl has led the European Working Group to finalise security requirements for the development and deployment of the system. The work has included an analysis of risk and threats to Galileo assets sited around the globe.

Dstl, in collaboration with the French Space Agency (CNES), has also generated the technical input to a successful joint UK/France bid to host the Galileo security monitoring centres. The centres are a key component of the ground infrastructure and an essential link in the system's security architecture, providing communications links between the EU member states and the Galileo operation centre for security issues. Dstl has also represented the UK in the EU Task Force that defined the Galileo signal structure, frequencies and modulation. Staff have been engaged in complex and highly technical negotiations with the US and China to ensure the security of Galileo operations regarding the compatibility of signals and spectrums.

The work emphasises Dstl's unique technical capability in Global Navigation Satellite Systems (GNSS), radio-navigation systems and navigation sensors.

# Awards and honours

Dstl staff are regular recipients of national and international accolades in recognition of their world-leading work in the S&T domain. The following highlights just a small selection of staff awards and honours from the past 12 months.

**Civilian honours**
Brian Shrubsall, from Physical Sciences, and Alan Hepper, from Biomedical Sciences (pictured above, Mr Hepper on right), received the award of OBE (Officer of the Most Excellent Order of the British Empire) in the 2009 Queen's Birthday Honours List. Brian was recognised for his exceptional work in vehicle ballistic protection and Alan for his outstanding work on personal protection and injury. Both areas of work have contributed to saving many lives in theatre. Ron Bowers, from Security Sciences, was awarded an OBE in the 2010 New Year's Honours List for his work in supporting military operations and OGDs.

**Pioneering science**
Roman Lukaszewski, of Biomedical Sciences, received the Outstanding Platform Presentation award at the US Defence Threat Reduction Agency (DTRA) Chemical & Biological Defense Science & Technology Conference in Dallas in November 2009. This award was in recognition of Roman's work on pre-symptomatic diagnosis of sepsis.

**Intelligent thinking**
Peter Harvey and John Dawson, from Information Management, were jointly awarded the prestigious John Benjamin prize for the best S&T research innovations and achievements in Dstl and QinetiQ. The award was given in recognition of their technical work on assisted imagery exploitation and the MATISSE toolset, which shows considerable promise for near-term exploitation in operations.

**Terry hits the target**
Terry Roach (pictured on page 33 with members of the Dstl Executive) has been awarded the multinational David R Israel Award for his distinguished contributions to missile defence concepts, co-operation and capabilities. The citation stated: "He has studied emerging threats, guided the development of innovative, high fidelity target systems, and shaped UK missile defence policy and international cooperative efforts. His diplomatic skills have built bridges across many continents in support of international…collaboration over the course of a distinguished career at the forefront of international missile defence cooperation."

**Removing the threat**
Staff from Detection Department received commendations from the Vice Chief of the Defence Staff and Second Permanent Under Secretary in MOD. This recognised the Department's unique contribution to the UK Global Threat Reduction programme against the spread of weapons and materials of mass destruction. The programme was set up to assist Russia in destroying 40,000 tonnes of chemical warfare agents. A separate award was presented in recognition of the team's contribution to the Canadian Government's programme in this area.

**Overt praise**
Keith Ritchie, from the Forensic Explosives Laboratory (FEL) in Security Sciences Department, has received a commendation from the Senior National Co-ordinator for Counter-Terrorism for his work to support Operation Overt – the ongoing investigation into terrorist liquid bomb threats on board transatlantic airliners. FEL as a whole was praised for continuing work in support of this operation.

**Coveted commendation**
Staff from Air and Weapons Systems Department received the coveted Chief of Defence Materiel award. The award was given in recognition of the team's 'meticulous planning, clear direction, detailed negotiation and strong commitment' in achieving approval to procure three Short Take-Off Vertical Landing (STOVL) variants of the Joint Strike Fighter (JSF) aircraft. This will allow the UK to participate in the operational test and evaluation of the JSF with the US.

**A shared approach**
The Shared Services team has been commended by the Defence Security Standards Agency (DSSA) for its work to implement a new system to store highly classified documents securely. The DSSA was so impressed that the new process will now be incorporated into the Defence Manual of Security and Dstl is cited as an example of best practice for other parts of MOD to follow.

**The Technical Cooperation Programme Awards 2009**
The Technical Cooperation Programme (TTCP) is an international organisation that collaborates in defence science and technical information exchange, programme harmonisation and shared research for the UK, US, Australia, Canada and New Zealand. These annual awards mark significant scientific achievement that have brought valuable benefits to the UK and TTCP's collaborative partners.

Broadband Global Area Network limitations and vulnerabilities assessment – Linda Holtby and Paul Howland

Generation of lead vaccine candidates against aerosolised biological warfare agents – Petra Oyston

CBD personal award – Rick Hall, former Senior Programme Leader (chemical, biological, radiological and nuclear)

Joint Systems and Analysis Group personal award – Bharatkumar Patel

Integrated IED protection – Patrick Burns and Toby Balfre

Underwater force protection: underwater harbour security trial – Martin Gething, Julian Deeks and Martin Stephens

Development of sonic thermography as a new wide area Non Destructive Evaluation technique – David Bruce and Peter Cawley (from Imperial College London)

**CSA commendations**
In 2009/10, a number of Dstl staff were awarded individual or team commendations by MOD's Chief Scientific Adviser (CSA) in recognition of their outstanding contributions in applying S&T to defence priorities. Commendations were as follows:
Driving force behind the 'IED Tiger Detect' Team – David Sherburn
Significant contribution to ageing aircraft systems programme – Steve Reed
Outstanding work on the Dstl horizon scanning programme – Gillian Strong
Leadership and vision as Head of MOD's Counter Terrorism Science and Technology Centre – Peter Thompson
Groundbreaking work on resilience and emergency planning for chemical, biological, radiological and nuclear attacks on the London Underground – Steve Preston, David Barlow, Fiona Butcher, Tim Foat, Clare Griffiths, Sarah Harrison, Christopher Holt, Bryan Lingard, James Nally, Simon Parker, Eleanor Shott and Steven Walker
Contribution to the StratTech Nuclear Weapons team – Paul Munford
Development of state-of-the-art respirator technologies and provision of invaluable advice and support to the new General Service Respirator programme – Rory Berridge, Christopher Hindmarsh, Paula Holden, Claire Pickering and Grant Richardson
A major experiment that progressed the remote detection of challenging targets – Lynda Sharp, Mark Ashforth, Garfield Reynolds, Giles Gibson, Stuart Reeman, Zoe Lench, Damien Lenaghan and Elizabeth Harris
Contribution to the submarine thin sonar array technology development (with QinetiQ, Thales UK, BAE Systems and DE&S) – Geoff Williams
Exceptional contribution to security sciences work – Dennis Fryer

# Sustainability

Building a sustainable future for our people, our communities and our wider environment is of critical importance to Dstl. We run a comprehensive sustainability programme that includes environmental management, education outreach and charitable work. Below is an overview of key highlights from the year.

## Environmental

Dstl continues to exceed Government targets in many environmental areas. For example, in 2008/09, we recycled 70 per cent of our waste (against a MOD target of 40 per cent). We also strive to promote sustainable practices in our major building and refurbishment work and reduce our carbon footprint. The new Receipt and Dispatch Building at Portsdown West features solar thermal units (to heat water), rain water harvesting and wind catches (for ventilation).

We work closely with external bodies to maintain and protect the Site of Special Site of Scientific Interest (SSSI) at Porton Down. For example, we have recently teamed up with Plantlife on a major project to protect the endangered Juniper plant (see above).

The roll-out of environmental systems has continued across our core sites. We have retained ISO 14001 certification at our Portsdown West site through periodic surveillance visits. We achieved certification at Fort Halstead in March 2010 and initial scoping work has commenced at Porton Down.

## Education

Many of our staff work as Science, Technology, Engineering and Maths (STEM) ambassadors in local schools, helping to inspire young people to pursue careers in these areas. In 2009/10, around 100 staff took part in more than 40 school events. These included career seminars for A-level students, interactive workshops in primary school classes, and participation in after-school clubs.

## A 'berry' good idea

A major project designed to protect the native Juniper plant is under way on the Porton Down range. More than 70 volunteers, including Dstl staff and local residents, are taking part in this project to grow thousands of new Juniper bushes at Porton Down, which is home to around 20 per cent of the UK's Juniper population.

The site has two age groups of Juniper – one, 100 years old, was well established before the growth in the rabbit population and the second, 50 years old, was able to get a footing during the myxomatosis outbreak of the 1950s and 1960s. At all other times, the rabbits, who particularly enjoy Juniper, have kept any new plants at bay.

Carl Mayers, who is leading the project in Dstl, said: "Junipers have a natural lifespan of around 100 years and, if we don't do something now, the Juniper on our range will be extinct in 50 years." The first part of the project involved collecting berries, checking seed fertility, processing seeds and storing for planting. Survey work will also be carried out to establish existing bush numbers and select the best locations for new plantings.

Carl Mayers said: "As well as growing thousands of new bushes, our field research will help to understand better the decline in Juniper numbers across Britain."

Porton Down is one of 26 sites across England involved in the project, which is being spearheaded by the charity Plantlife and funded by Natural England.

## Travel

We actively encourage staff to consider sustainable modes of travel through a range of incentives, such as our cycle-to-work scheme. Our car-share scheme has helped to achieve a 2 per cent reduction in single occupancy commuter car travel to Porton Down. This is an encouraging start and we aim to reduce this by a further 5 per cent by 2013.

We offer coach and minibus services for staff who chose to travel daily rather than relocate as part of our site rationalisation programme, with an average 50 to 60 passengers per day. This has helped to save 5,550 car commuting miles per day.

In December 2009, we secured a £1.3 million grant from the Department of Energy and Climate Change to implement state-of-the-art video conferencing technology as part of a travel avoidance project.

> 90 staff, including the Chief Executive, raised more than £6,000 for Wiltshire Air Ambulance in a charity abseil down the Dstl Headquarters Building.

A total of 12 telepresence units will be introduced across Dstl and it is expected that this will significantly reduce business travel. Dstl is piloting this technology for MOD and wider Government.

## Charitable activities

We now host dedicated events in support of nominated charities chosen by our staff. In 2009, our staff raised more than £29,000 for Cancer Research, Help for Heroes and local air ambulance units through a range of imaginative fundraising events. For example, around 90 members of staff, including the Chief Executive, raised more than £6,000 for Wiltshire Air Ambulance in a charity abseil down the Dstl Headquarters Building.

## Reducing fossil fuel use

Dstl is playing a key role in helping wider MOD to reduce its environmental impact.

As one example, Dstl staff have provided critical technical support to a major MOD study looking to reduce operational dependency on fossil fuels. This work, which has been carried out as part of a Capability Vision, was designed to help MOD build a better understanding of fuel use across the Armed Forces and the challenges and opportunities in identifying suitable alternatives. It has focused on areas such as predictive fuel energy usage, potential technology options and contingency planning.

Dstl conducted the study in conjunction with BAE Systems and Rolls-Royce and the outputs are shaping thinking on where future investment in energy should be targeted and the potential effectiveness of fossil fuel replacements.

Overall, the team looked at how alternative energy sources and technologies developed chiefly in the civilian market could be applied to military situations – from batteries, fuel cells, photovoltaic and thermo-photovoltaic devices to kinetic energy storage and wind power.

The study has looked both at short-term opportunities, such as using less fossil fuel in Afghanistan and reducing the logistic burden, as well as longer term aspirations for a fossil fuel-free Royal Navy. The study team also looked at guidelines needed to ensure that MOD considers energy conservation in its procurement decisions.

The Dstl-led study has informed the next stages of the Capability Vision but it is also shaping and influencing the wider sustainable procurement agenda and climate change strategy. The next phase will see the demonstration and assessment of competing fuel-reduction technologies.

# 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 Dstl's policies, aims and objectives while safeguarding the public funds and departmental assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Government Accounting.

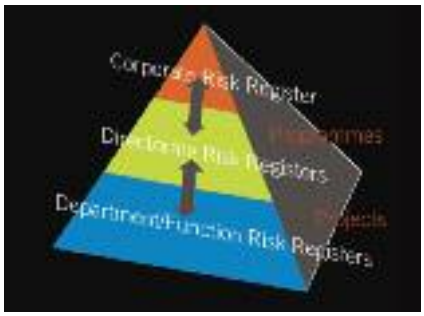
Dstl was established as an Executive Agency of MOD in July 2001. It operates as a Trading Fund for which the Secretary of State for Defence has ultimate responsibility.

The then Secretary of State appointed the Minister of State for Strategic Defence Acquisition Reform[1] to assist him in the discharge of his responsibilities with regard to Dstl during the financial year 2009/10. This includes determining the policy and resources framework within which Dstl operates, setting its objectives and targets, and monitoring its overall performance. The Minister is supported by the Owner's Council that comprises senior stakeholders across Government and by MOD's Business Strategy and Governance branch. Dstl also has a Board and an Executive Committee through which governance is effected.

The Corporate Plan, agreed with Ministers, sets out our strategic objectives and the way in which we will deliver impartial and trusted support and advice based on our excellent knowledge and understanding of defence-relevant S&T. The plan also summarises corporate-level risks that could impact on delivery of successful performance. We also have an agreed set of in-year Key Targets that enables us to track the performance of the organisation as it delivers the Corporate Plan. As the Principal Accounting Officer, I am responsible for informing Ministers and the Permanent Under Secretary of State of any material issue that may inhibit the effective and efficient performance of Dstl.

**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 a process designed to identify and prioritise the risks to the achievement of departmental 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 Dstl for the year ended 31 March 2010 and up to the date of approval of the Annual Report and Accounts, and accords with Treasury guidance.

**Capacity to handle risk and the control framework**
Dstl has a well-established corporate approach to risk management, which continues to improve in line with the evolution of the business. Dstl's risk management process is based around the strategic risk cycle, principles and terminology outlined in 'Management of Risk' (issued by the Treasury in 2004, updated in 2007), the UK Risk Management Standard (ISO/IEC 73) and the new British Standard (BS ISO 31000). The procedure sets out a framework to ensure consistency in the way in which Dstl identifies and assesses risks, in terms of probability and impact, develops mitigation and contingency plans and records and reports these matters. Each risk has an owner. Dstl policy on corporate governance and the management of risk is set out in the Dstl Management System (MS), which is available to all staff electronically. Dstl's risk management and corporate governance policies, encompassing audit and business continuity, are also implemented in line with Dstl procedures in the MS.




Risks are identified against a framework of Dstl's five Critical Success Factors and a set of six generic risks. Risks are considered at different levels in the organisation and delegated or escalated as appropriate. As shown, the main axis runs from Department and Function level to corporate level, with separate directorate-level risks, where applicable. There is also a project/programme axis.

The Executive reviews the corporate risks, the status of controls and the progress of mitigating actions at regular meetings and updates the Corporate Risk Register. Operations managers (for both Departments and Functions) meet on a monthly basis and risk management is considered at these meetings. The Operations Director maintains a directorate-level risk register and reviews cross-department or common risks at her monthly operations meetings with Department Managers. Functional Directors and their Heads of Functions also review risks at their management meetings. Training on risk management is carried out formally through dedicated workshops

[1]The then Minister for DE&S undertook this role until June 2009.

with particular groups such as project managers, and this is also facilitated by the Corporate Risk Manager and risk adviser responsible for project, departmental or corporate risk reviews.

As Chief Executive, I am responsible for informing the Dstl Board of any significant, emerging risks and for ensuring that Departments are informed about corporate risks that affect their areas. I have ultimate responsibility for the risk management process. I attend the Audit Committee and I have reported progress in both the development and implementation of the risk process at appropriate meetings.

In the forthcoming year, the internal auditors will be carrying out a specific audit of risk management arrangements and the Corporate Risk Manager has identified and adopted a suitable external benchmarking model for Dstl.

**Extract from the PKF[2] Annual Report:**
"Dstl has a clearly defined corporate risk framework, which involves regular risk management reporting at various levels within the organisation. There is a clear process for identifying, assessing, communicating, escalating and managing risks and strategic risks are agreed and signed off at Executive and Board levels. A full description of the process is in place along with guidance and support through the intranet and the Corporate Risk Manager."

**Business continuity**
Dstl's approach to business continuity and incident management is set out in the MS. Drawing on business continuity management guidelines (as outlined in MOD's Joint Service Publication 503) and external good practice, the approach covers business continuity processes and requirements at corporate and line management level. The most recent report from the MOD Director of Business Resilience (February 2010) gave an opinion of substantial assurance and pointed to the clear top-level commitment for business continuity management. The organisation is continuing to work towards full compliance with ISO 25999 part 2. PKF also carried out an audit of business continuity, including questions raised on behalf of Defence Internal Audit (DIA) for its pan-MOD audit of business continuity. They concluded that appropriate arrangements were in place for managing the corporate and site business continuity arrangements. PKF did raise improvement recommendations, most notably to broaden the business continuity assessment to include key suppliers and contractors and their supply chains.

**Information management**
As an MOD Trading Fund, Dstl is required by the Cabinet Office to include a statement on information management (comprising personal and non-personal information) within its Statement on Internal Control.

Information assurance maturity progress. Dstl has maintained a sharp focus on Information Management Maturity (IMM) through its IMM Programme over the reporting period. Dstl achieved Level 2 in the MOD strategic assessment of Information Assurance Maturity (IAM) based on the Cabinet Office assessment framework criteria[3]. This MOD review process included DIA representation.

Third-party information assurance. In line with Dstl 's aspirations to achieve Level 3 maturity by April 2011, the future Corporate Information Systems provider will be required to demonstrate this level of maturity on contract award (to independent audit).

Information Handling Training (IHT). Dstl successfully achieved Level 1 IHT for all staff within the reporting period and has incorporated IHT into the induction and return-to-work processes.

Data Handling Review (DHR) compliance. Dstl has conducted a comprehensive fit-gap against the recommendations of the Data Handling Review and has implemented all recommendations relevant to Dstl. A Joint Compliance Committee is being established under the Senior Information Risk Officer to maintain a continuous fit-gap overview of this and other key compliance areas of interest.
The risk to Dstl's reputation due to a loss of sensitive information is identified on the Corporate Risk Register and considered explicitly at Audit Committee meetings. Internal Dstl audit has demonstrated the delegation and management of this risk throughout the organisation.

The PKF Annual Report noted that, during the year, the strategy has been developed for monitoring and measuring IMM progress and performance in response to the requirements from the Cabinet Office and MOD. They are satisfied that this approach is appropriate and the first audits will take place during 2010/11.

[2]Dstl internal auditor 2009/10.

[3]Level 1 – Initial:
- Main Board aware of criticality of Information Assurance (IA) to the business and of the Board's legal requirements.
- Majority of DHR mandatory measures are at this level.

Level 2 – Established:
- IA processes institutionalised within the Department, delivery partners and arm's length bodies.
- Targeted IA education and training in place.

Level 3 – Business enabling:
- Measured improvement in Information Risk Management (IRM) behaviours at all levels within the department, delivery partners and arm's length bodies.
- All critical areas of the business subject to a robust IA regime.

**Management processes**
The major overhaul of the Management System (MS) under the i lab change project concluded at the end of March 2010, although a small number of processes are yet to be updated. All key business processes are documented and owned by certain Heads of Functions and, in some cases, appropriately skilled and experienced staff are appointed as process managers.

**Project audit**
PKF carried out 20 project audits during the year. The objective of the audits was to appraise the internal control arrangements in place over the selected projects and to ensure compliance with the MS and financial reporting requirements. Each of the projects reviewed was judged to have been delivered in accordance with the project plan and the budget set for the project. All projects were found to be compliant with the Cost Assurance and Analysis Service requirements in terms of the accuracy of the recording of costs. Generally, PKF testing indicated that the projects were being managed in accordance with the Dstl project management approach as set out within the MS. However, some areas of weakness in compliance remain.

**Review of effectiveness**
As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review is informed by the work of the internal auditors and the executive managers within the organisation, who have responsibility for the development and maintenance of the internal control framework. This is augmented by comments made by the external auditors in their management letter and other reports. Budget holders at corporate and departmental or functional level review budgets on a monthly basis and reforecast quarterly. Business cases for capital expenditure are reviewed and approved by my Investment Panel. I have been advised on the implications of the result of my review of the effectiveness of the system of internal control by the Board and the Audit Committee and a plan to address weaknesses and ensure continuous improvement of the system is in place.

**Audit Committee and audit arrangements**
Dstl's audit arrangements comply with Government Internal Audit Standards and details are set out in the MS. The Audit Committee, which met four times during 2009/10, reports to the Board on the implications of assurances provided in respect of risk and control in Dstl as well as the adequacy of audit arrangements. The Audit Committee also reviews both the internal and external auditing requirements, the adequacy of the financial systems, risk management, control and governance. I and the Finance Director, as well as the National Audit Office (NAO) and PKF, have attended all Audit Committee meetings. My Quality Manager attends another MOD Trading Fund Audit Committee to help identify good practice.

The delay in recruiting replacement Non-Executive Directors (NEDs) during the year resulted in the Audit Committee being non-quorate for a proportion of its meetings. This was addressed by ensuring the ratification of Audit Committee actions by the Dstl Board and the attendance of the Dstl Chairman at the meeting to sign off the Dstl Annual Report and Accounts. In view of the non-quorum, the Chairman of the Audit Committee resolved that it would be inappropriate for the committee to complete the NAO self-assessment checklist in 2009/10.

The Dstl Board reviews the effectiveness of the system of internal control through reports on an exceptional basis from its committees and those Executive Directors who have responsibility for Dstl's strategic improvement programmes and key risks. Where any control deficiencies are identified, suitable mitigation measures are put in place.

PKF was Dstl's internal auditor for 2009/10. Regular reports to senior management and the Dstl Audit Committee provide independent assessment of the system of internal control and include recommendations for improvement.

**Annual assessment of governance**
As part of the internal audit process, Dstl's governance arrangements were reviewed by PKF. The auditors reported that the governance arrangements were adequate: "The overall governance structure has not significantly changed since the last review reported in March 2009. Although the structure and indeed many of the practices continue to follow best practice in many respects and we identified no major governance weaknesses, governance has been impacted by fewer NEDs being in place during the first part of the year." The report identified differences in practice from the Framework Document in some areas, for example the terms of reference of the Audit Committee. The Framework Document is now being updated in line with evolved practices. The underlying issue behind the delay in recruiting new NEDs has also been addressed.

**External reviews**

LRQA – ISO 9001:2000 and TickIT Guide issue 5

The Dstl Management System was subject to a surveillance visit by Lloyd's Register Quality Assurance (LRQA) in June 2009, and a follow-up review in December 2009. In both cases, it was concluded that "…the system continues to meet the requirements of ISO 9001:2000 in the areas sampled." This included TickIT Guide issue 5 re-approval to the required standards. No major non-conformities were raised.

The following comments were made by LRQA following both visits:

- System effectiveness as demonstrated by data reviewed at Board meetings and via internal audit reports generally demonstrated that the system was effective in meeting Dstl and its customers' needs.
- Definition and implementation of the new vendor rating system was a significant improvement together with the vendor performance review currently being run as a pilot scheme on the major strategic Extra Mural Research suppliers. Further improvements to the Commercial Services Function were under way as part of the Commercial Transformation initiative.
- Work continues to improve the MS via the ongoing Business Process Improvement Programme.
- It was apparent that considerable improvements were being made in regard to operation of the Commercial Services Function.

LRQA – ISO 14001 – 2004

The organisation has implemented an environmental management system at Fort Halstead and maintained its management system at Portsdown West in conformance with ISO 14001:2004.

The following key comments were made by LRQA:

- Although the system has only recently been established at Fort Halstead, examples of good practice were seen (eg waste management) and there had been significant improvements in housekeeping. Continual improvement was also demonstrated in respect of several other areas (eg energy management and travel).
- At Portsdown West, more robust contractor audits had commenced and a desktop emergency exercise had identified improvements in oil spill prevention and response arrangements.

MOD's Chief Information Officer (CIO)

The MOD CIO IAM Peer Review Report for 2009/10 dated 30 December 2009 stated:

"Particular strengths that were identified were:

- Regular consideration of IRM at Board level, and the existence of a dedicated security governance structure. The Review Team were of the opinion that Dstl has a deep technical understanding of IRM and were already near to Maturity Level 3.
- Dstl treats information risk as a category of risk within the overall mature risk handling methodology of the organisation, without special treatment. The major information risk, of loss or improper disclosure, is present on the Board-level risk register.
- The delivery of mandatory training and the general awareness of IA requirements. The latter stemming from an existing culture of valuing high-quality information."

MOD CIO wrote to me regarding IHT dated 30 September 2009:

"I am very impressed with the rigour of Dstl's approach and I know that you are providing the exemplar for others across MOD to follow in the IA sphere. I would very much like to find manageable ways in which that valuable role could be exploited practically but without it becoming a financial or bureaucratic burden."

**Significant internal control problems**

There are currently no significant internal control problems. PKF stated: "Based on the audit work we have carried out we have concluded that overall the system of internal control is adequate for the purpose of Dstl and was found to be operating effectively in most key areas."

PKF audits support the annual Statement on Internal Control required by HM Treasury. These were carried out in accordance with Government Internal Audit Standards and other external requirements. The Dstl governance structure and many of the practices were judged by PKF to continue to follow governance best practice in many respects.

During 2009/10, Dstl has not had any incidents that have resulted in the unauthorised disclosure of protected personal data. However, Dstl is investigating a complaint involving a third party in June 2009, which has been raised with the Information Commissioner. This involved the unauthorised disclosure of a name and address for one individual (who has been notified). The investigation has resulted in appropriate remedial action being implemented by the third-party supplier to avoid any future unauthorised disclosure.

## Saving time, saving lives

Delivering fast, effective treatment to injured troops plays a crucial role in saving lives on the front line.

The historical '1-2-4 hour' principle, indicating target times to deliver levels of treatment to injured casualties, has been well established since the 1970s. However, the nature of conflict and types of injuries have changed markedly in the intervening years.

In the past year, Dstl analysts have conducted an analysis of existing doctrinal treatment timelines on behalf of the Surgeon General's Department. The Dstl team developed a technique to analyse the survival of battlefield casualties based on the severity of their injuries and the time taken to evacuate them to medical treatment facilities. Working closely with Dstl's medical experts, the team used operational research methods to translate the stages of casualty evacuation into an analytical framework. This has subsequently been applied to casualty data from Iraq and Afghanistan to demonstrate how the probability of casualty survival changes over time. This has helped to create a model that can be used to advise on the operational 'footprint' of medical facilities and evacuation platforms, and the impact on injured personnel.

Research on this topic has also supported military planners in NATO in reviewing the impact of timelines policy applied on operations in Afghanistan.

This fundamental work was recognised by the former UK Surgeon General, Lieutenant General Louis Lillywhite, as having the potential for "wide implications for our understanding of optimal timelines for the delivery of military and civilian trauma care".

# Statement of Dstl's and Chief Executive's responsibilities

Under Section 4(6) of the Government Trading Funds Act 1973, the Treasury has directed Dstl to prepare accounts for each financial year in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis, modified for the effect of changing prices on the valuation of fixed assets, and give a true and fair view of Dstl's state of affairs at the year end and of its profit, total recognised gains and losses, and cash flows for the financial year.

In preparing accounts, Dstl is required to:

- observe the Accounts Direction issued by the Treasury, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis
- make judgements and estimates on a reasonable basis
- state whether applicable accounting standards have been followed, and disclose and explain any material departures in the financial statements
- prepare the accounts on a going concern basis, unless it is inappropriate to presume that Dstl will continue in operation
- disclose that the Directors who held office at the date of approval of this report confirm that, so far as they are each aware, there is no relevant audit information of which Dstl's auditors are unaware; and each Director has taken all the steps that they ought to have taken as a Director to make themselves aware of any relevant audit information and to establish that Dstl's auditors are aware of that information.

The Treasury has appointed the Chief Executive as the Accounting Officer of Dstl. Her relevant responsibilities as Accounting Officer, including her responsibility for the propriety and regularity of the public finances for which she is answerable and for the keeping of proper records, are set out in the Accounting Officers' Memorandum issued by the Treasury and published in 'Managing Public Money' (The Stationery Office).

**Report of protected personal data-related incidents**

The Government has made a commitment to enhance transparency with Parliament and the public about action to safeguard information and the results of that action. As part of this process, departments and their agencies are required to publish details of incidents that have resulted in the unauthorised disclosure of personal data in their annual reports.

An incident is defined as any circumstance (loss, unauthorised disclosure, insecure disposal) of inadequately protected electronic equipment, devices or paper documents from either secure Government premises or outside of secured Government premises; insecure disposal of inadequately protected electronic equipment, devices or paper documents; unauthorised disclosure or any other situation.

Protected data is defined as data that meets the definition of the minimum scope of protected personal data, or data that Dstl considers should receive a similar level of protection because it would put those affected at significant risk of harm or distress.

Incidents, the disclosure of which would in itself create an unacceptable risk of harm, may be excluded in accordance with the exemptions contained in the Freedom of Information Act 2000 or may be subject to the limitations of other UK information legislation.

During 2009/10, Dstl has not had any incidents that have resulted in the unauthorised disclosure of protected personal data. However, Dstl is investigating a complaint, involving a third-party supplier and an unauthorised disclosure of personal data, which has been raised with the Information Commissioner (further details are provided on page 41).

Frances Saunders
Chief Executive
24 June 2010

# Our Board of Directors

## Chairman

**Sir Richard Mottram**
Appointed
1 August 2008

Sir Richard is currently Chairman of Amey plc, a Board member of the Ditchley Foundation and Ashridge Business School, and a Visiting Professor at the London School of Economics. He was formerly a civil servant and was a Permanent Secretary from 1992 to 2007, with roles in the Office of Public Service and Science, the MOD, and in the Cabinet Office with responsibility for intelligence and security (including as Chairman of the Joint Intelligence Committee). He spent much of his earlier career in MOD working on defence strategy and policy and corporate planning of the defence programme.

## Non-Executive Directors

**Elisabeth Astall**
Appointed
1 September 2009

Elisabeth Astall is currently Director of Accenture UK. Since joining Accenture in 1984, Elisabeth has specialised in serving Government clients, including the NHS, Home Office and the Department of Social Security. She also has extensive experience in the private sector, working with clients such as Rolls-Royce, British Aerospace and British Steel. Elisabeth is a Trustee of the Social Mobility Foundation and serves with the London School of Economics Council of Governors.

**Emma Davies**
(Head of Business Strategy and Governance, MOD)
Appointed
21 April 2009

Emma represents the Owner of Dstl, MOD. Originally trained as a solicitor, Emma joined the Civil Service in 1992 and spent eight years as an advocate and reviewing lawyer in the Crown Prosecution Service before joining Criminal Justice IT in the Home Office. She has also worked in the Social Exclusion Unit in the Home Office, leading business planning, HR, finance and Ministerial support; the Government Office for London, as Head of Crime and Drugs Reduction; and Her Majesty's Courts Service as Head of Criminal Business.

**Jonathan Knowles**
Appointed
1 September 2009

Jonathan Knowles is currently the President of Group Research at F. Hoffman-La Roche Ltd. He has held various international positions at the company since 1997, and prior to this he served in key executive roles with GlaxoSmithKline. Currently, he is also a Member of the Board of Chugai Pharmaceuticals and he was a member of the Board of Genentech for more than 10 years. Jonathan's scientific career has focused on molecular biology and genetics, and he has a longstanding career in academia, holding various fellowship positions across Europe and the US.

**Lord May of Oxford**
Appointed
1 March 2006

Lord May has an internationally distinguished scientific career, which has included Presidency of the Royal Society between 2000 and 2005. He was also Chief Scientific Adviser to the UK Government for five years and Head of the Office of Science and Technology. Lord May was awarded his Knighthood in 1996 and he was appointed a Companion of the Order of Australia in 1998. Both awards recognise his services to science. Lord May was made a life peer in 2001.

**Chris Swinson**
Appointed
1 November 2005

Chris is a highly respected financier and he is well-regarded within the accountancy profession. His roles have included Senior Partner for BDO Stoy Hayward and President of the Institute of Chartered Accountants. Chris is a renowned expert in corporate accountability and governance and he has served as an expert witness in various litigation cases, such as the Barings fraud case. In addition to his role at Dstl, Chris also holds a number of public and charitable appointments.

## Executive Directors

**Frances Saunders**
Chief Executive
Appointed*
3 May 2006

Prior to taking up her current role in 2007, Frances served as Dstl Technical Director and she was a founding director of Ploughshare – the organisation's technology management company. Frances spent four years working in the Office of Science and Technology at the Department of Trade and Industry, taking the lead for the management of the interface with the seven Research Councils. Before moving into management, Frances worked as a research scientist in the liquid crystal display team at the Royal Signals and Radar Establishment. She also enjoyed a stint as an electronics engineer in the motor industry.

**Mark Alexander**
Finance Director
Appointed
7 December 2009

Mark Alexander joined Dstl from Ordnance Survey, where he was Director of Finance. Mark has more than 20 years' experience in all aspects of financial management in the public and private sectors. He has also held senior roles at the construction group Bovis Lend Lease, train operator Laing Rail and in the technology sector at AEA Technology.

**Barbara Busby**
HR and Communications Director (Acting)
Appointed
23 May 2009

Barbara joined Dstl as Head of Organisational Development in 2005. Previously, she had filled a number of key strategic HR roles in the public sector, including Organisational Development Manager at the Environment Agency and Employee Development Manager in the electricity sector. Originally trained as a psychologist, Barbara started her career as a research engineer at British Aerospace before moving into HR on secondment.

**Jill Cook**
Operations Director
Appointed
29 March 2007

Jill has held several key roles within MOD, including Programme Manager for the UK's Medical Countermeasures development programme and Department Manager for Physical Sciences within Dstl. Jill has also served as the UK's representative to the NATO Long Term Scientific Study of the defensive aspects of chemical and biological warfare, and Chairman of the NATO International Medical Countermeasures Working Group. Jill spent many years working as a research scientist before moving into management.

**Jonathan Lyle**
Programme Office Director
Appointed
1 March 2010

Jonathan has enjoyed a distinguished career in MOD and wider Government spanning more than 20 years. Jonathan's previous roles have included Director General Helicopters in DE&S and Director of the College of Management and Technology at the Defence Academy, Shrivenham. Earlier in his career, Jonathan was involved in critical work in Whitehall on strengthening S&T procurement and the restructuring of the Research Councils.

**Peter Starkey**
Strategy and Implementation Director
Appointed*
10 June 2009

Before taking up his current role, Peter served as Dstl Future Business Director and Director of the Centre for Defence Analysis. He has also worked in MOD Head Office as Director of Scrutiny and Analysis for Policy and Programmes. Earlier in his career, Peter was involved in the provision of operational analysis studies and advice for the RAF as well as leading research teams in the Royal Aircraft Establishment. Prior to joining MOD in 1978, Peter enjoyed a career as a teacher and lecturer in computers and systems.

*All appointment dates relate to current roles on the Board.

# Dstl Board and Executive

## The Board

| | | |
|---|---|---|
| Sir Richard Mottram | Non-Executive Chairman | |
| Frances Saunders | Chief Executive (CE) | |
| Mark Hone | Finance Director | Resigned 30 April 2009 |
| Stephen Williams | Acting Finance Director | Appointed 1 May 2009<br>Resigned 6 December 2009 |
| Mark Alexander | Finance Director | Appointed 7 December 2009 |
| Peter Starkey | Deputy CE/Strategy and Implementation Director | |
| Michael Steeden | Technical Director | Resigned 30 November 2009* |
| Jonathan Lyle | Programme Office Director | Appointed 1 March 2010 |
| Jill Cook | Operations Director | |
| Ruth Davies | Human Resources and Communications Director | Resigned 22 May 2009 |
| Barbara Busby | Human Resources and Communications Director (Acting) | Appointed 23 May 2009 |
| Christopher Swinson | Independent Non-Executive Director | |
| Lord May of Oxford | Independent Non-Executive Director | |
| Jonathan Knowles | Independent Non-Executive Director | Appointed 1 September 2009 |
| Elisabeth Astall | Independent Non-Executive Director | Appointed 1 September 2009 |
| Huw Walters | Non-Executive Director | Resigned 25 March 2009** |
| Emma Davies | Non-Executive Director | Appointed 21 April 2009 |

*Resigned to take up the post of Dstl Strategic Relations Director.
**Resigned on 25 March 2009 but was not replaced until 21 April 2009.

## The Executive

| | | |
|---|---|---|
| Frances Saunders | Chief Executive | |
| Mark Hone | Finance Director | Resigned 30 April 2009 |
| Stephen Williams | Acting Finance Director | Appointed 1 May 2009<br>Resigned 6 December 2009 |
| Mark Alexander | Finance Director | Appointed 7 December 2009 |
| Peter Starkey | Deputy CE/Strategy and Implementation Director | |
| Michael Steeden | Technical Director<br>Strategic Relations Director | Resigned 30 November 2009<br>Appointed 1 December 2009 |
| Jonathan Lyle | Programme Office Director | Appointed 1 March 2010 |
| Jill Cook | Operations Director | |
| Ruth Davies | Human Resources and Communications Director | Resigned 22 May 2009 |
| Barbara Busby | Human Resources and Communications Director (Acting) | Appointed 23 May 2009 |
| Christopher Gibson | Programme Director (Systems) | |
| Brian Court | Infrastructure Director | |
| Peter Thompson | Programme Director (Research and Technology) | Appointed 1 April 2009 |
| Andrew Bell | Chief Technology Officer | Appointed 18 December 2009 |

# Directors' remuneration report

## Remuneration policy

The following remuneration policy refers to the employment of its Directors. Four Directors employed during the year are Senior Civil Servants (SCS) and subject to SCS terms and conditions, including the remuneration policy. Their NCPA arrangements fall under SCS rules rather than the Dstl performance-award system. The remaining Directors are Dstl employees and subject to the same performance-related remuneration policy as all other Dstl staff.

## Performance conditions

Directors who are subject to SCS terms and conditions are also subject to the SCS performance conditions. The remaining Executive Directors are subject to the Dstl performance management rules.

## Service contracts

Dstl appointments are made in accordance with the Civil Service Commissioners' Recruitment Code and, wherever possible, on the basis of merit and fair and open competition.
Unless otherwise stated, the officials named in this report hold appointments that are open-ended until they reach the standard retirement age of 60. Early termination would result in the individual receiving compensation (except in cases of misconduct) as outlined in the Civil Service Compensation Scheme.
There were no significant awards made to past senior managers.

## Dstl Board Directors' remuneration (excluding pension arrangements)

This information is subject to audit.

| Name | Note | Salary band | Salary band | NCPA** | NCPA | Fee | Fee |
|---|---|---|---|---|---|---|---|
| | | 2009/10 | 2008/09 | 2009/10 | 2008/09 | 2009/10 | 2008/09 |
| | | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 |
| Sir Richard Mottram | | | | | | 35 - 40 | 25 - 30 |
| Frances Saunders | | 90 - 95 | 85 - 90 | 10 - 15 | 10 - 15 | | |
| Mark Hone | | 15 - 20<br>*65 - 70* | 65 - 70 | | | | |
| Stephen Williams* | | 35 - 40<br>*60 - 65* | | 0 - 5 | | | |
| Mark Alexander | | 25 - 30<br>*90 - 95* | | | | | |
| Peter Starkey | | 75 - 80 | 75 - 80 | 5 - 10 | 10 - 15 | | |
| Michael Steeden | | 45 - 50<br>*75 - 80* | 75 - 80 | | | | |
| Jonathan Lyle | | 5 - 10<br>*90 - 95* | | | | | |
| Jill Cook | | 70 - 75 | 70 - 75 | 5 - 10 | 0 - 5 | | |
| Ruth Davies | | 10 - 15<br>*70 - 75* | 70 - 75 | 5 - 10 | 5 - 10 | | |
| Barbara Busby | | 60 - 65<br>*60 - 65* | | 5 - 10 | | | |
| Christopher Swinson | | | | | | 20 - 25 | 20 - 25 |
| Lord May of Oxford | | | | | | 20 - 25 | 20 - 25 |
| Jonathan Knowles | | | | | | 10 - 15<br>*20 - 25* | |
| Elisabeth Astall | | | | | | 10 - 15<br>*20 - 25* | |
| Huw Walters | | | | | | | |
| Emma Davies | | | | | | | |

*Figures in italics denote full-year equivalent salary.*
*Interim position only – resumed role as Head of Finance on appointment of new Finance Director.
**Non-consolidated Performance Award (NCPA).
NCPAs have been awarded as indicated for 2009/10. Fees have been paid as indicated for 2009/10.
Fees for Jonathan Knowles have been accrued, not actually paid at the Balance Sheet date.
No additional remuneration or other allowances were paid to members of the Dstl Board.
No Board members, key managerial staff or other related parties have undertaken any material transactions with Dstl during the year.
The salary bands set out above relate only to emoluments paid during the period of each Director's membership of the Dstl Board.
Huw Walters and Emma Davies have received no fee; they represented MOD as a Non-Executive Directors.

## Dstl Board pension provision

This information is subject to audit.
The information below details the real increase in pension and related lump sum.

| Name | Real increase in pension [and related lump sum at age 60] | Total accrued pension at age 60 at 31/03/10 [and related lump sum] | Cash equivalent value at 31/03/09* | Cash equivalent value at 31/03/10 | Real increase in cash equivalent transfer value as funded by employer |
|---|---|---|---|---|---|
| | £'000 | £'000 | £'000 | £'000 | £'000 |
| Frances Saunders[1] | 7.5 - 10 | 50 - 55 | 713.0 | 918.0 | 162.0 |
| Mark Hone | 0 - 2.5<br>[0 - 2.5] | 10 - 15<br>[35 - 40] | 190.0 | 194.0 | 1.0 |
| Stephen Williams | 0 - 2.5<br>[0 - 2.5] | 5 - 10<br>[15 - 20] | 120.0 | 140.0 | 11.0 |
| Mark Alexander | 0 - 2.5 | 5 - 10 | 56.0 | 63.0 | 8.0 |
| Peter Starkey | 5 - 7.5<br>[17.5 - 20] | 35 - 40<br>[110 - 115] | 644.0 | 818.0 | 133.0 |
| Michael Steeden[1] | 2.5 - 5 | 35 - 40 | 642.0 | 754.0 | 19.0 |
| Jonathan Lyle[1] | 0 - 2.5 | 45 - 50 | 762.0 | 760.0 | 5.0 |
| Jill Cook | 0 - 2.5<br>[2.5 - 5] | 25 - 30<br>[80 - 85] | 487.0 | 539.0 | 25.0 |
| Ruth Davies[1] | 0 - 2.5 | 5 - 10 | 85.0 | 81.0 | [6.0] |
| Barbara Busby | 0 - 2.5 | 5 - 10 | 59.0 | 82.0 | 18.0 |

*The figure may be different from the closing figure in last year's accounts. This is due to the Cash Equivalent Transfer Value (CETV) factors being updated to comply with The Occupational Pension Schemes (Transfer Values) (Amendment) Regulations 2008.
[1]Premium Pension Scheme, only refund of contributions due.
With the exception of Frances Saunders, Ruth Davies, Michael Steeden and Jonathan Lyle, who belong to the Premium Civil Service Pension Scheme, all Directors belong to the Classic Civil Service Pension Scheme. Both schemes are part of the Principal Civil Service Pension Scheme (PCSPS). See Note 6 to the accounts.

## Executive committee remuneration (excluding pension arrangements)

This information is subject to audit.

| Name | Note | Salary Band 2009/10 £'000 | Salary Band 2008/09 £'000 | NCPA 2009/2010 £'000 | NCPA 2008/09 £'000 |
|---|---|---|---|---|---|
| Frances Saunders | | 90 - 95 | 85 - 90 | 10 - 15 | 10 - 15 |
| Mark Hone | | 15 - 20<br>*65 - 70* | 65 - 70 | | |
| Stephen Williams | | 35 - 40<br>*60 - 65* | | 0 - 5 | |
| Mark Alexander | | 25 - 30<br>*90 - 95* | | | |
| Peter Starkey | | 75 - 80 | 75 - 80 | 5 - 10 | 10 - 15 |
| Michael Steeden[1] | | 70 - 75<br>*75 - 80* | 75 - 80 | | |
| Jonathan Lyle | | 5 - 10<br>*90 - 95* | | | |
| Jill Cook | | 70 - 75 | 70 - 75 | 5 - 10 | 0 - 5 |
| Ruth Davies | | 10 - 15<br>*70 - 75* | 70 - 75 | 5 - 10 | 5 - 10 |
| Barbara Busby | | 60 - 65<br>*60 - 65* | | 5 - 10 | |
| Christopher Gibson | | 75 - 80 | 70 - 75 | 5 - 10 | 5 - 10 |
| Brian Court | | 55 - 60 | 10 - 15 | 0 - 5 | |
| Peter Thompson | | 75 - 80 | | 5 - 10 | |
| Andrew Bell | | 15 - 20<br>*60 - 65* | | 0 - 5 | |

*Figures in italics denote full-year equivalent salary.*
[1]Michael Steeden left the main Board but he has continued to serve on the Executive Committee throughout the year on a part-time basis.

## Executive committee pension provision

This information is subject to audit.

| Name | Real increase in pension [and related lump sum at age 60] | Total accrued pension at age 60 at 31/03/10 [and related lump sum] | Cash equivalent value at 31/03/09* | Cash equivalent value at 31/03/10 | Real increase in cash equivalent transfer value as funded by employer |
|---|---|---|---|---|---|
| | £'000 | £'000 | £'000 | £'000 | £'000 |
| Frances Saunders[1] | 7.5 - 10 | 50 - 55 | 713.0 | 918.0 | 162.0 |
| Mark Hone | 0 - 2.5 [0 - 2.5] | 10 - 15 [35 - 40] | 190.0 | 194.0 | 1.0 |
| Stephen Williams | 0 - 2.5 [0 - 2.5] | 5 - 10 [15 - 20] | 120.0 | 140.0 | 11.0 |
| Mark Alexander | 0 - 2.5 | 5 - 10 | 56.0 | 63.0 | 8.0 |
| Peter Starkey | 5 - 7.5 [17.5 - 20] | 35 - 40 [110 - 115] | 644.0 | 818.0 | 133.0 |
| Michael Steeden[1] | 2.5 - 5 | 35 - 40 | 642.0 | 754.0 | 19.0 |
| Jonathan Lyle[1] | 0 - 2.5 | 45 - 50 | 762.0 | 760.0 | 5.0 |
| Jill Cook | 0 - 2.5 [2.5 - 5] | 25 - 30 [80 - 85] | 487.0 | 539.0 | 25.0 |
| Ruth Davies[1] | 0 - 2.5 | 5 - 10 | 85.0 | 81.0 | [6.0] |
| Barbara Busby | 0 - 2.5 | 5 - 10 | 59.0 | 82.0 | 18.0 |
| Christopher Gibson | 0 - 2.5 [2.5 - 5] | 20 - 25 [70 - 75] | 402.0 | 452.0 | 22.0 |
| Brian Court | 0 - 2.5 [2.5 - 5] | 15 - 20 [50 - 55] | 218.0 | 251.0 | 19.0 |
| Peter Thompson | 0 - 2.5 [5 - 7.5] | 15 - 20 [45 - 50] | 175.0 | 215.0 | 32.0 |
| Andrew Bell | 0 - 2.5 [2.5 - 5] | 10 - 15 [40 - 45] | 191.0 | 201.0 | 14.0 |

*The figure may be different from the closing figure in last year's accounts. This is due to the CETV factors being updated to comply with The Occupational Pension Schemes (Transfer Values) (Amendment) Regulations 2008.
[1]Premium Pension Scheme, only refund of contributions due.
With the exception of Frances Saunders, Ruth Davies, Michael Steeden and Jonathan Lyle, who belong to the Premium Civil Service Pension Scheme, all Directors belong to the Classic Civil Service Pension Scheme. Both schemes are part of the PCSPS. See Note 6 to the accounts.
There was no non-cash element of the remuneration package.
No compensation was payable to former senior managers during the year.
There were no amounts payable to third parties for services of a senior manager.

Frances Saunders
Chief Executive
24 June 2010

## An absorbing concept

New strippable paint coatings that can decontaminate themselves after absorbing chemical agents are being developed by Dstl in partnership with Akzo Nobel.

Strippable paint coatings are currently used on vehicles, in theatre, to change their colour quickly. This paint can be applied with minimal training by military personnel and removed using simple techniques. The coatings also have applications in temporary camouflage as the paint can be used to adapt flexibly to a vehicle's colour and glint signature – reducing the vehicle's visibility. Dstl has pioneered a concept of use for these coatings in aiding chemical, biological and radiological decontamination.

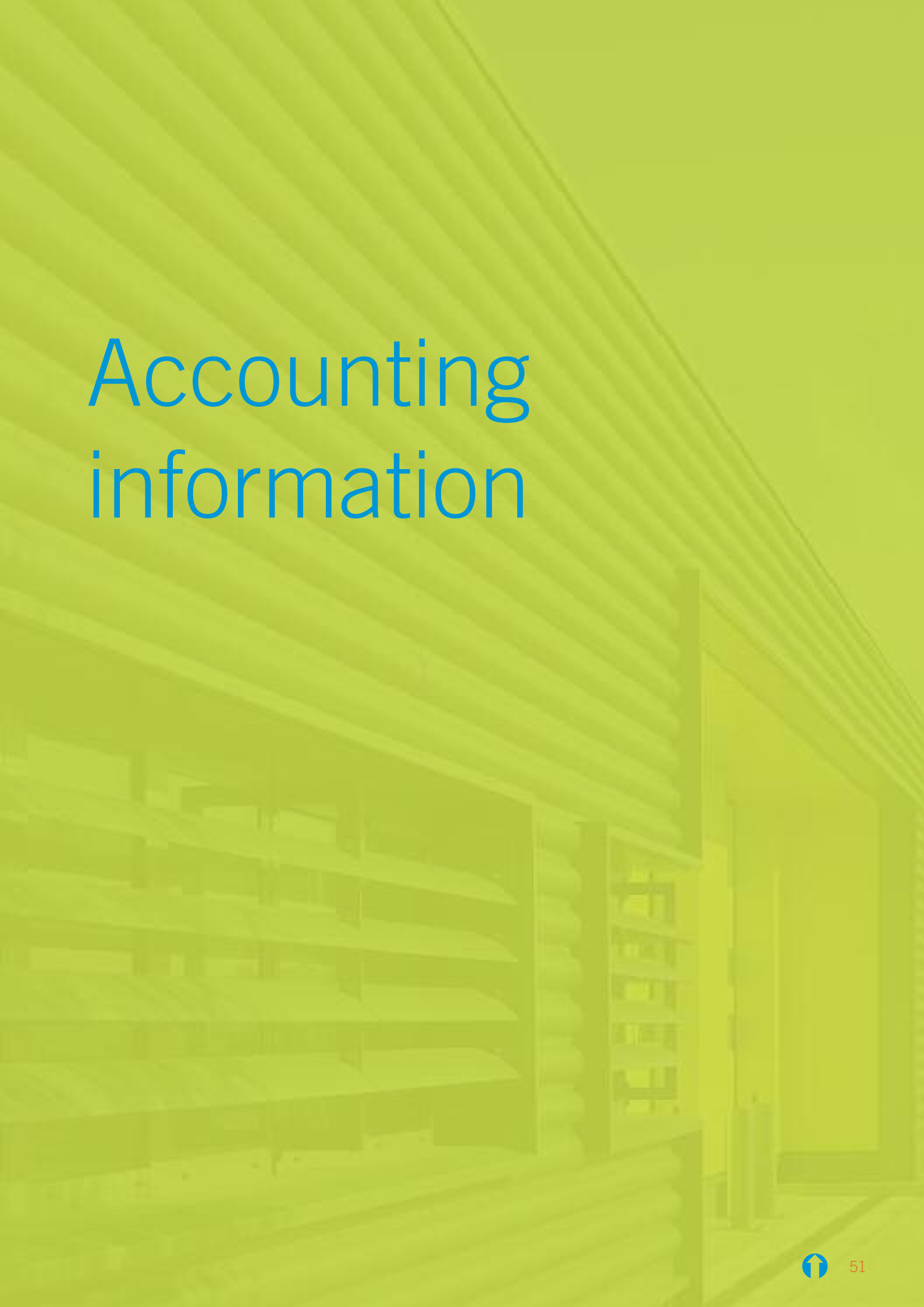
Dstl is now developing coatings that can actually absorb chemical, and tie-down biological and radiological agents – protecting those operating inside and outside the vehicle. In the long term, it is hoped to develop coatings that can detect the presence of contaminants and self-decontaminate the absorbed agents.

The French Délégation Generalé pour l'Armement* was so impressed with Dstl's coatings concept that they provided their unique radiological trials and training facility at Bourges for evaluation in July 2009. Results from these trials showed that the removal of a layer of peelable coating pre-applied before contamination was highly effective in decontaminating the radiological hazard from an armoured vehicle. The UK and France are looking to develop and refine the concept together under a technical accord. A joint programme of decontamination studies is under way, and further radiological decontamination trials are planned for summer 2010.

US counterparts have also expressed interest in the technology – the Joint Program Executive Office and Army Research Office are funding a technical demonstration in the US and Dstl has also been invited to bid into related DTRA programme areas.

*The French government agency that conducts research and evaluation for weapons systems.

# Accounting information



## 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 Defence Science and Technology Laboratory for the year ended 31 March 2010 under the Government Trading Funds Act 1973. These comprise the Group and Trading Fund Statement of Income and Expenditure, the Group and Trading Fund Statement of Financial Position, the Group and Trading Fund Statement of Cash Flows, the Group and Trading Fund Statement of Changes in Taxpayers' Equity and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

**Respective responsibilities of the Defence Science and Technology Laboratory, Chief Executive and auditor**

As explained more fully in the Statement on Internal Control and Chief Executive's Responsibilities, the Defence Science and Technology Laboratory and Chief Executive are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

**Scope of the audit of the financial statements**

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of whether: the accounting policies are appropriate to the Defence Science and Technology Laboratory's and Group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Defence Science and Technology Laboratory; and the overall presentation of the financial statements.

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

**Opinion on regularity**

In my opinion, 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 that govern them.

**Opinion on financial statements**

In my opinion:

- the financial statements give a true and fair view of the state of the Defence Science and Technology Laboratory's and the Group's affairs as at 31 March 2010 and of the Defence Science and Technology Laboratory's and the Group's profit, changes in taxpayers' equity and cash flows for the year then ended; and
- the financial statements have been properly prepared in accordance with the Government Trading Funds Act 1973 and HM Treasury directions issued thereunder.

**Opinion on other matters**

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with HM Treasury directions made under the Government Trading Funds Act 1973; and
- the information, which comprises pages 4 to 29, 31 to 37 and page 42, included within the Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

**Matters on which I report by exception**

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

- adequate accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records or returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Statement on Internal Control does not reflect compliance with HM Treasury's guidance.

**Report**

I have no observations to make on these financial statements.

Amyas C E Morse
Comptroller and Auditor General
National Audit Office
157-197 Buckingham Palace Road
Victoria London SW1W 9SP
7 July 2010

## Statement of Income and Expenditure for the year ended 31 March 2010

| | Note | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|---|
| **Turnover** | **2** | **435.3** | **405.2** | **379.9** | **434.4** | **404.7** | **378.9** |
| Cost of sales | | (122.6) | (113.3) | (106.5) | (122.6) | (113.4) | (106.2) |
| **Net income** | | **312.7** | **291.9** | **273.4** | **311.8** | **291.3** | **272.7** |
| Operating expenses | | (291.8) | (295.7) | (259.9) | (290.2) | (294.4) | (258.6) |
| **Operating profit/(loss)** | **3** | **20.9** | **(3.8)** | **13.5** | **21.6** | **(3.1)** | **14.1** |
| Share of associate's income | | – | – | – | – | – | – |
| Finance income | 7 | 0.1 | 1.8 | 4.6 | 0.1 | 1.8 | 4.6 |
| Finance expense | 8 | (1.2) | (0.9) | – | (1.2) | (0.9) | – |
| **Profit/(loss) for the year** | | **19.8** | **(2.9)** | **18.1** | **20.5** | **(2.2)** | **18.7** |
| Dividend | 10 | (4.0) | (28.0) | (3.0) | (4.0) | (28.0) | (3.0) |
| **Retained profit/(loss) for the year** | | **15.8** | **(30.9)** | **15.1** | **16.5** | **(30.2)** | **15.7** |

## Statement of changes in taxpayers' equity for the year ended 31 March 2010

Group

| | Note | Retained earnings £ million | Public dividend capital £ million | Government grant reserve £ million | Revaluation surplus £ million | Total £ million |
|---|---|---|---|---|---|---|
| **Balance at 1 April 2008** | | **161.6** | **50.4** | **–** | **47.2** | **259.2** |
| Changes in accounting policy | | – | – | – | – | – |
| Restated balance | | 161.6 | 50.4 | – | 47.2 | 259.2 |
| Transfer to retained earnings | | | | | (1.2) | (1.2) |
| Surplus on revaluation of properties | 11 | | | | 1.4 | 1.4 |
| (Deficit) on application of modified historic cost accounting to property, plant and equipment | 11 | | | | (8.2) | (8.2) |
| Surplus/(deficit) on revaluation of non-current financial asset investments | 12 | | | | – | – |
| Surplus/(deficit) on application of modified historic cost accounting to intangible assets | 13 | | | | – | – |
| Net gains and losses not recognised in the Statement of Income and Expenditure | | | | | (8.0) | (8.0) |
| Net (loss) for the period | | (2.9) | | | | (2.9) |
| Dividend | 10 | (28.0) | | | | (28.0) |
| Transfer from revaluation surplus | | 1.2 | | | | 1.2 |
| Modified historic cost accounting | 11, 13 | – | | | | – |
| **Balance at 31 March 2009** | | **131.9** | **50.4** | **–** | **39.2** | **221.5** |
| Changes in accounting policy | | – | – | – | – | – |
| Restated balance | | 131.9 | 50.4 | – | 39.2 | 221.5 |
| Government grants received | | | | 1.3 | | 1.3 |
| Release of grant to income | | | | – | | – |
| Transfer to retained earnings | | | | | (1.1) | (1.1) |
| Surplus on revaluation of properties | 11 | | | | 3.2 | 3.2 |
| (Deficit) on application of modified historic cost accounting to property, plant and equipment | 11 | | | | (10.5) | (10.5) |
| Surplus on revaluation of non-current financial asset investments | 12 | | | | 0.5 | 0.5 |
| Surplus on application of modified historic cost accounting to intangible assets | 13 | | | | 0.1 | 0.1 |
| Net gains and losses not recognised in the Statement of Income and Expenditure | | | | | (7.8) | (7.8) |
| Net profit for the period | | 19.8 | | | | 19.8 |
| Dividend | 10 | (4.0) | | | | (4.0) |
| Transfer from revaluation surplus | | 1.1 | | | | 1.1 |
| Modified historic cost accounting | 11, 13 | (0.2) | | | | (0.2) |
| **Balance at 31 March 2010** | | **148.6** | **50.4** | **1.3** | **31.4** | **231.7** |

# Statement of changes in taxpayers' equity for the year ended 31 March 2010

Trading Fund

| | Note | Retained earnings £ million | Public dividend capital £ million | Government grant reserve £ million | Revaluation surplus £ million | Total £ million |
|---|---|---|---|---|---|---|
| **Balance at 1 April 2008** | | **162.7** | **50.4** | **–** | **45.6** | **258.7** |
| Changes in accounting policy | | – | – | – | – | – |
| Restated balance | | 162.7 | 50.4 | – | 45.6 | 258.7 |
| Transfer to retained earnings | | | | | (1.2) | (1.2) |
| Surplus on revaluation of properties | 11 | | | | 1.4 | 1.4 |
| (Deficit) on application of modified historic cost accounting to property, plant and equipment | 11 | | | | (8.2) | (8.2) |
| Surplus on revaluation of non-current financial asset investments | 12 | | | | 0.5 | 0.5 |
| Surplus/(deficit) on application of modified historic cost accounting to intangible assets | 13 | | | | – | – |
| Net gains and losses not recognised in the Statement of Income and Expenditure | | | | | (7.5) | (7.5) |
| (Loss) for the period | | (2.2) | | | | (2.2) |
| Dividend | 10 | (28.0) | | | | (28.0) |
| Transfer from revaluation surplus | | 1.2 | | | | 1.2 |
| Modified historic cost accounting | 11, 13 | – | | | | – |
| **Balance at 31 March 2009** | | **133.7** | **50.4** | **–** | **38.1** | **222.2** |
| Changes in accounting policy | | – | – | – | – | – |
| Restated balance | | 133.7 | 50.4 | – | 38.1 | 222.2 |
| Government grants received | | | | 1.3 | | 1.3 |
| Release of grant to income | | | | – | | – |
| Transfer to retained earnings | | | | | (1.1) | (1.1) |
| Surplus on revaluation of properties | 11 | | | | 3.2 | 3.2 |
| (Deficit) on application of modified historic cost accounting to property, plant and equipment | 11 | | | | (10.5) | (10.5) |
| Surplus on revaluation of non-current financial asset investments | 12 | | | | 0.5 | 0.5 |
| Surplus on application of modified historic cost accounting to intangible assets | 13 | | | | 0.1 | 0.1 |
| Net gains and losses not recognised in the Statement of Income and Expenditure | | | | | (7.8) | (7.8) |
| Net profit for the period | | 20.5 | | | | 20.5 |
| Dividend | 10 | (4.0) | | | | (4.0) |
| Transfer from revaluation surplus | | 1.1 | | | | 1.1 |
| Modified historic cost accounting | 11, 13 | (0.2) | | | | (0.2) |
| **Balance at 31 March 2010** | | **151.1** | **50.4** | **1.3** | **30.3** | **233.1** |

The notes on pages 58 to 81 form an integral part of these accounts.

# Statement of Financial Position as at 31 March 2010

| | Note | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | |
| **Non-current assets** | | | | | | | |
| Property, plant and equipment | 11 | 206.2 | 196.6 | 168.6 | 206.2 | 196.6 | 168.6 |
| Financial assets | 12 | 3.3 | 2.9 | 2.9 | 1.9 | 1.4 | 0.9 |
| Investment in associate | 12 | – | – | – | – | – | – |
| Intangible assets | 13 | 2.6 | 2.2 | 0.7 | 2.6 | 2.2 | 0.7 |
| Receivables | 16 | 0.7 | – | – | 4.0 | 2.4 | 1.3 |
| Total non-current assets | | 212.8 | 201.7 | 172.2 | 214.7 | 202.6 | 171.5 |
| **Current assets** | | | | | | | |
| Work in progress | 15 | 2.6 | 2.9 | 7.6 | 2.6 | 3.0 | 7.9 |
| Receivables | 16 | 128.1 | 138.2 | 132.5 | 127.9 | 137.9 | 132.2 |
| Cash and cash equivalents | 17 | 40.3 | 30.4 | 59.6 | 39.7 | 30.3 | 59.4 |
| Total current assets | | 171.0 | 171.5 | 199.7 | 170.2 | 171.2 | 199.5 |
| **Total assets** | | 383.8 | 373.2 | 371.9 | 384.9 | 373.8 | 371.0 |
| **Current liabilities** | | | | | | | |
| Trade and other payables | 18 | 116.4 | 116.2 | 105.8 | 116.1 | 116.1 | 105.5 |
| Short-term provisions | 19 | 3.1 | 10.6 | 0.7 | 3.1 | 10.6 | 0.7 |
| Total current liabilities | | 119.5 | 126.8 | 106.5 | 119.2 | 126.7 | 106.2 |
| **Non-current assets plus net current assets** | | 264.3 | 246.4 | 265.4 | 265.7 | 247.1 | 264.8 |
| **Non-current liabilities** | | | | | | | |
| Other payables | 18 | 29.2 | 22.5 | 0.1 | 29.2 | 22.5 | – |
| Long-term provisions | 19 | 3.4 | 2.4 | 6.1 | 3.4 | 2.4 | 6.1 |
| Total non-current liabilities | | 32.6 | 24.9 | 6.2 | 32.6 | 24.9 | 6.1 |
| **Assets less liabilities** | | **231.7** | **221.5** | **259.2** | **233.1** | **222.2** | **258.7** |
| **Taxpayers' equity** | | | | | | | |
| Public dividend capital | 24 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 |
| Government grant reserve | 25 | 1.3 | – | – | 1.3 | – | – |
| Revaluation surplus | | 31.4 | 39.2 | 47.2 | 30.3 | 38.1 | 45.6 |
| Retained earnings | | 148.6 | 131.9 | 161.6 | 151.1 | 133.7 | 162.7 |
| **Total taxpayers' equity** | | **231.7** | **221.5** | **259.2** | **233.1** | **222.2** | **258.7** |

The financial statements were signed on 24 June 2010

The financial statements were authorised for issue on 21 July 2010*

**Frances Saunders, Chief Executive**

*This represents the date of despatch by the Trading Fund's Board to the Secretary of State for Defence for laying before the Houses of Parliament.

# Statement of cash flows for the year ended 31 March 2010

| | Note | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|---|
| **Cash flows from operating activities** | | | | | | | |
| Net profit/(loss) before taxation | | 20.9 | (3.8) | 13.5 | 21.6 | (3.1) | 14.1 |
| Adjustment for: | | | | | | | |
| Depreciation | 3, 11 | 12.1 | 8.4 | 9.2 | 12.1 | 8.4 | 9.2 |
| Profit on sale of non-current financial asset investments | 3, 12 | (0.3) | – | – | – | – | – |
| Amortisation | 3, 13 | 1.2 | 0.7 | 0.8 | 1.2 | 0.7 | 0.8 |
| Operating profit before working capital changes | | 33.9 | 5.3 | 23.5 | 34.9 | 6.0 | 24.1 |
| (Increase)/decrease in work in progress | | 0.4 | 4.6 | (0.6) | 0.4 | 4.8 | (0.7) |
| (Increase)/decrease in receivables | | 9.3 | (5.7) | (39.1) | 8.5 | (6.6) | (39.3) |
| Increase/(decrease) in payables | | (4.8) | 20.6 | 20.7 | (5.1) | 20.8 | 20.6 |
| Use of provisions | | (7.3) | (3.4) | (1.3) | (7.3) | (3.4) | (1.3) |
| Cash generated from operations | | 31.5 | 21.4 | 3.2 | 31.4 | 21.6 | 3.4 |
| Finance expense | | (1.0) | – | – | (1.0) | – | – |
| Net cash inflow from operating activities | | 30.5 | 21.4 | 3.2 | 30.4 | 21.6 | 3.4 |
| **Cash flows from investing activities** | | | | | | | |
| Purchases of property, plant and equipment | | (28.8) | (43.8) | (33.1) | (28.8) | (43.8) | (33.1) |
| Purchases of non-current financial asset investments | | – | – | (0.2) | – | – | (0.1) |
| Proceeds from sale of non-current financial asset investments | | 0.3 | – | – | – | – | – |
| Purchases of intangible assets | | (1.2) | (2.2) | – | (1.2) | (2.2) | – |
| Loans made to other bodies | | – | – | – | (0.1) | (0.1) | – |
| Repayment of loans made to other bodies | | – | – | – | – | – | 0.2 |
| Finance income | | 0.1 | 1.9 | 4.8 | 0.1 | 1.9 | 4.8 |
| Net cash used in investing activities | | (29.6) | (44.1) | (28.5) | (30.0) | (44.2) | (28.2) |
| **Cash flows from financing activities** | | | | | | | |
| Loans received from MOD | | 10.7 | 21.5 | – | 10.7 | 21.5 | – |
| Receipt of Government grant | | 1.3 | – | – | 1.3 | – | – |
| Dividend paid | | (3.0) | (28.0) | (3.0) | (3.0) | (28.0) | (3.0) |
| Net cash received/(used) from financing activities | | 9.0 | (6.5) | (3.0) | 9.0 | (6.5) | (3.0) |
| Net increase/(decrease) in cash and cash equivalents | | 9.9 | (29.2) | (28.3) | 9.4 | (29.1) | (27.8) |
| Brought forward cash and cash equivalents | | 30.4 | 59.6 | 87.9 | 30.3 | 59.4 | 87.2 |
| **Carried forward cash and cash equivalents** | **17** | **40.3** | **30.4** | **59.6** | **39.7** | **30.3** | **59.4** |

## 1 Accounting policies

**(a) Statement of accounting polices**

These financial statements have been prepared for the first time in accordance with International Financial Reporting Standards (IFRS) as adapted for the public sector in the 2009/10 Government Financial Reporting Manual (FReM), issued by HM Treasury.

Where the FReM permits a choice of accounting policy, the policy that is judged to be most appropriate to the particular circumstances of the Group for the purpose of giving a true and fair view has been selected. The particular policies adopted by the Group are described in this note. They have been applied consistently in dealing with items that are considered material to the accounts.

**(b) Accounting convention**

These accounts have been prepared under the historical cost convention, modified to account for revaluation of property, plant and equipment, and for the application of fair value where appropriate.

**(c) Estimation techniques**

There have been no revisions of estimation techniques. Accruals are estimated with reference to available documentation, advice from management and from information gained from similar previous events, and are the best estimate at the date of these financial statements.

Staff holiday is not recorded on central management information systems and therefore the holiday pay accrual calculation is an area where judgement is exercised.

Freehold land and buildings are subject to a quinquennial revaluation by an independent, professional valuer.

Depreciation of property, plant and equipment, and amortisation of intangible assets, is based on the useful economic life of the asset. Useful economic lives are reviewed at least annually. The bases for estimating useful economic life include experience of previous similar assets, the condition and performance of the asset, and knowledge of technological advances and obsolescence. In respect of the depreciation of property, an independent professional evaluation of a property's useful economic life is provided during the quinquennial rolling valuation programme.

Valuations of non-current financial assets are performed by an independent professional following the British Venture Capital Association (BVCA) Guidelines.

Where appropriate, for specialised facilities, a business-in-use valuation based on discounted projected cash flows has been adopted.

Measurement of provisions are based on third-party estimates.

**(d) Basis of consolidation**

The consolidated accounts incorporate the accounts of the Trading Fund with its associate, Tetricus Limited, and its wholly owned subsidiary undertaking, Ploughshare Innovations Limited (Ploughshare). Its joint venture Enigma Diagnostics Limited has not been consolidated under IAS31 Interests in Joint Ventures as the effect of applying IAS31 is immaterial to the Group financial statements.

The subsidiary undertaking, which the Trading Fund has the power to control, has been consolidated according to IAS27 Consolidated and Separate Financial Statements. All intra-group transactions and balances are eliminated on consolidation. The associate, over which the Trading Fund has the power to exercise significant influence, has been consolidated using the equity method. The accounts of all Group undertakings are drawn up to 31 March 2010.

**(e) Property, plant and equipment**

The valuation bases for different classes of asset are as follows:

Land and buildings:

Porton Down –
Depreciated Replacement Cost (DRC)

Portsdown West –
Existing Use Valuation (EUV), except for more specialised buildings that are valued on a DRC basis. The whole site will be valued on a DRC basis at its next professional independent valuation

For land and buildings that have been declared surplus –
Market Value

Legacy and acquired facilities –
Net recoverable amount

Specialised facilities –
Lower of DRC and recoverable amount
The recoverable amount is calculated as the greater of:
(i) the estimated net present value of the cash flow derived from the continued use of the asset in its current state;
(ii) the estimated net sale proceeds of the asset.

Plant, machinery, computers and office equipment –
Net current replacement cost.

A facility is a collection of non-current assets operated together to provide discrete services. Non-current assets included as legacy and acquired facilities incorporate, as appropriate, land, buildings, plant and machinery, computers and office equipment.

Property is revalued in the years between professional independent valuations using the following indices:

Land: Gross Domestic Product Deflator Index

Buildings: Buildings Cost Information Service (BCIS), All-In Tender Price Index.

Plant and equipment, and computer equipment assets, are revalued using relevant indices published by the Office for National Statistics (ONS).

Plant and machinery, computers and office equipment are capitalised where the cost of acquisition is greater than £10,000.

Depreciation is provided on a straight-line basis over the useful economic lives of the assets, which are generally considered to be within the following:

| | |
|---|---|
| Freehold land | Not depreciated |
| Freehold buildings | 1 - 40 years |
| Legacy and acquired facilities | 1 - 12 years |
| Plant and machinery | 1 - 25 years |
| Computers and office equipment | 1 - 10 years |

Any profit on disposal is treated as other operating income. Any loss on disposal is charged against operating profit.

Assets are reviewed for indications of impairment on a regular basis, including a review of estimated useful economic lives. All assets are independently inspected on a three-year rolling programme. Included within freehold land and buildings are properties from which rental income is derived. These are not material and are not disclosed separately.

**(f) Non-current assets held for sale**
Where there is a commitment to sell a non-current asset and there is a high probability of sale within a year, the asset is reclassified as a current asset held for sale.

**(g) Intangible assets**
Intangible assets comprise purchased software licences and the cost of software developed in house where there is reliable cost information. Amortisation is on a straight-line basis over the shorter of the licence term or the useful economic life. Intangible assets are revalued annually using the Retail Price Index (excluding housing) published by the ONS.

**(h) Research and development**
Research and development expenditure incurred during performance of a contract for a customer is chargeable to the customer. Internally funded research expenditure is charged to the Statement of Income and Expenditure as incurred.

**(i) Work in progress**
Work in progress represents costs incurred on firm- and fixed-price contracts and is stated at the lower of cost and net realisable value. Cost represents direct materials and labour and other directly attributable overheads.

**(j) Amounts recoverable under contract**
Amounts recoverable under contract represent turnover recognised in excess of the values invoiced (net of VAT) and will include an appropriate amount of profit attributed to the contract. Amounts recoverable under contract are reduced for the provision of any known or anticipated losses. Amounts recoverable under contract are included in trade receivables and other current assets.

**(k) Leases**
The Group has no finance leases. Operating leases are charged to the Statement of Income and Expenditure on an accruals basis.

**(l) Financial instruments**
Financial assets and liabilities are recognised where the Group has become a party to contractual terms of a financial instrument. Financial instruments are initially measured at fair value, which is usually cost, and are then subsequently measured at amortised cost using the effective interest rate method.

**(m) Provisions**
Provisions are made where the Group has a present legal or constructive obligation as a result of a past event, and where it is probable that a reliably measured economic outflow will result. Where the time value of money is material, provisions are stated at discounted values.

**(n) Government grants**
Where a Government grant has been received to fund the purchase of a specific asset, the grant is credited to a Government grant reserve. The reserve is released to income over the useful economic life of the asset.

**(o) Pensions**
Past and present employees are covered by the provisions of the Principle Civil Service Pension Scheme (PCSPS), which is an unfunded multi-employer scheme providing benefits based on final salary. The Trading Fund is unable to identify its share of the underlying assets and liabilities and therefore it accounts for the scheme as if it was a defined contribution scheme. As a result, the amount charged to the Statement of Income and Expenditure represents the contributions payable to the scheme in respect of the accounting period. Employees joining after 1 October 2002 could opt to open a partnership pension, with an employer contribution. Details of rates and amounts of contributions during the year are given in Note 6.

**(p) Foreign currencies**
Transactions denominated in foreign currencies are translated into sterling at the rates of exchange ruling at the date of the transaction. Monetary assets and liabilities that are denominated in foreign currency are retranslated at the rates of exchange ruling at the Statement of Financial Position date. Gains and losses arising on retranslation are included in the Statement of Income and Expenditure for the period.

**(q) Corporation tax**
The Trading Fund is exempt from corporation tax under Section 829(2) of the Income and Corporation Taxes Act 1988 and consequently the requirements to account for current tax and deferred tax are not relevant.

**(r) Going concern**
The accounts have been prepared on the basis that the Group is a going concern.

**(s) Turnover**
Turnover is recognised when the significant risks and rewards of ownership have been transferred to the buyer and there is reasonable certainty of recovery of the consideration receivable. For cost-plus contracts, turnover is recognised as work is performed, and includes an appropriate amount of profit. For firm- and fixed-price contracts, turnover is recognised as agreed milestones are reached or as deliverables are met. Contracts are assessed for the most likely outcome. An appropriate amount of profit is attributed where there is reasonable certainty of the final outcome. Losses are recognised as soon as they are foreseen.

**(t) Segmental reporting**
The principal activities of the Group are managed through Departments as disclosed in Note 31 on segmental reporting. The accounting policies of the operating segments are the same as those of the Group. Corporate overheads are allocated to operating segments of the Trading Fund on the basis of headcount with the exception of estates management charges, which are allocated on area of occupation. Inter-segment sales and transfers within the Trading Fund are at cost. Trading with Ploughshare Innovations Limited is on an arm's length basis. A total of 95 per cent of Group turnover is derived from UK customers and consequently a geographical analysis of results is not included.

**(u) Early adoption of IFRS, amendments and interpretations**
The Group has adopted IFRS8 operating segments early. The effective date of the standard was for accounting periods beginning on or after 1 January 2010. The adoption affects disclosure requirements only.

**(v) IFRS, amendments and interpretations in issue but not yet effective or adopted**

International Accounting Standard (IAS)8, accounting policies, changes in accounting estimates and errors require disclosures in respect of new IFRS amendments and interpretations that are or will be applicable after the reporting period. There are a number of IFRS, amendments and interpretations issued by the IAS Board that are effective for financial statements after this reporting period. The following have not been adopted early by the Group:

IFRS9 financial instruments
A new standard intended to replace IAS39. The effective date is for accounting periods beginning on or after 1 January 2013.

IFRS1 first-time adoption of international financial reporting standards
Three sets of amendments to the existing standard. The effective date of one set of amendments is for accounting periods beginning on or after 1 July 2009. The effective date of the second set of amendments is for accounting periods beginning on or after 1 January 2010. The effective date of the third set of amendments is for accounting periods beginning on or after 1 July 2010.

IFRS2 share-based payment
Two sets of amendments to the existing standard. The effective date of one set of amendments is for accounting periods beginning on or after 1 July 2009.
The effective date of the second set of amendments is for accounting periods beginning on or after 1 January 2010.

IFRS3 business combinations
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 July 2009.

IFRS5 non-current assets held for sale and discontinued operations
Two sets of amendments to the existing standard. The effective date of one set of amendments is for accounting periods beginning on or after 1 July 2009.
The effective date of the second set of amendments is for accounting periods beginning on or after 1 January 2010.

IFRS8 operating segments
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2010.

IAS1 presentation of financial statements
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2010.

IAS7 statements of cash flow
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2010.

IAS17 leases
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2010.

IAS24 related-party disclosures
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2011.

IAS27 consolidated and separate financial statements
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 July 2009.

IAS32 financial instruments: presentation
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 February 2010.

IAS36 impairment of assets
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 January 2010.

IAS38 intangible assets
Amendments to the existing standard. The effective date is for accounting periods beginning on or after 1 July 2009.

IAS39 financial instruments: recognition and measurement
Two sets of amendments to the existing standard. The effective date of one set of amendments is for accounting periods beginning on or after 1 July 2009.
The effective date of the second set of amendments is for accounting periods beginning on or after 1 January 2010.

International Financial Reporting Interpretations Committee (IFRIC)9 reassessment of embedded instruments
Amendments to the existing interpretation. The effective date is for accounting periods beginning on or after 1 July 2009.

IFRIC14 prepayments of a minimum funding requirement
Amendments to the existing interpretation. The effective date is for accounting periods beginning on or after 1 January 2011.

IFRIC16 hedges of a net investment in a foreign operation
A new interpretation. The effective date is for accounting periods beginning on or after 1 July 2009.

IFRIC17 distributions of non-cash assets to owners
A new interpretation. The effective date is for accounting periods beginning on or after 1 July 2009.

IFRIC19 extinguishing financial liabilities with equity instruments
A new interpretation. The effective date is for accounting periods beginning on or after 1 January 2011.

None of these new or amended standards and interpretations are likely to be applicable or are anticipated to have a future material impact on the financial statements of the Group.
In addition, the following are changes to the FReM, which will be applicable for accounting periods beginning on 1 April 2010:

Chapter 6 tangible non-current assets
New standard Financial Reporting Standard (FRS)30 accounting for heritage assets.

Chapter 8 impairments
Adaption of IAS36 impairment of assets.

Chapter 11 income and expenditure
Removal of cost of capital charging.

Chapter 13 accounting for consolidated fund revenue
Introduction of trust statements for revenue and some associated expenditure.

None of these changes to the FReM are anticipated to have a future material impact on the financial statements of the Group.

## 2 Turnover

Turnover by major class of customer is analysed as follows:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| MOD: | 385.9 | 358.9 | 327.7 | 385.9 | 358.9 | 327.7 |
| Research | 226.0 | 215.4 | 188.2 | 226.0 | 215.4 | 188.2 |
| Non-research | 159.9 | 143.5 | 139.5 | 159.9 | 143.5 | 139.5 |
| Non-MOD: | 49.4 | 46.3 | 52.2 | 48.5 | 45.8 | 51.2 |
| Government departments | 30.4 | 28.0 | 22.9 | 30.5 | 28.2 | 22.9 |
| Non-Exchequer income | 18.8 | 18.1 | 29.2 | 18.0 | 17.6 | 28.3 |
| Non-Exchequer royalty income | 0.2 | 0.2 | 0.1 | – | – | – |
| **Total** | **435.3** | **405.2** | **379.9** | **434.4** | **404.7** | **378.9** |

Turnover is categorised according to the main contracted customer. All turnover relates to the same class of business, which is the supply of scientific and technical services. This is conducted principally in the UK in sterling, and no geographical market has contributed significantly to turnover. See Note 31 for operating segment disclosures.
The comparatives for 2008 and 2009 have been adjusted to reflect a misclassification between MOD research and MOD non-research turnover. For 2008, MOD research turnover has been increased by £6.5 million, and MOD non-research turnover has been reduced by £6.5 million. For 2009, MOD research turnover has been increased by £4.8 million, and MOD non-research turnover has been reduced by £4.8 million.

## 3 Operating profit

This is stated after charging/(crediting):

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Depreciation charge for year: | 12.1 | 8.2 | 9.2 | 12.1 | 8.2 | 9.2 |
| Depreciation of owned property, plant and equipment | 11.1 | 7.3 | 7.1 | 11.1 | 7.3 | 7.1 |
| Exceptional costs of impairment of property, plant and equipment | 1.9 | 0.9 | 1.9 | 1.9 | 0.9 | 1.9 |
| Adjustment valuation of property, plant and equipment | (0.9) | – | 0.2 | (0.9) | – | 0.2 |
| Amortisation charge for the year: | 1.2 | 0.7 | 0.8 | 1.2 | 0.7 | 0.8 |
| Amortisation of software licences | 1.0 | 0.7 | 0.7 | 1.0 | 0.7 | 0.7 |
| Exceptional costs of impairment of intangible assets | 0.1 | – | – | 0.1 | – | – |
| Adjustment valuation of software licences | 0.1 | – | 0.1 | 0.1 | – | 0.1 |
| Loss on disposal of owned property, plant and equipment | – | 0.2 | – | – | 0.2 | – |
| Profit on disposal of non-current financial asset investment | (0.3) | – | – | – | – | – |
| Operating lease rentals: | | | | | | |
| – property | 6.4 | 8.3 | 7.4 | 6.4 | 8.3 | 7.4 |
| – plant | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Travel, subsistence and hospitality (excluding exceptional costs of i lab) | 3.3 | 3.0 | 3.6 | 3.3 | 3.0 | 3.6 |
| Foreign exchange losses | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| *Auditor's remuneration and expenses | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Exceptional costs of i lab | 7.2 | 14.0 | 0.7 | 7.2 | 14.0 | 0.7 |
| Other operating income | (6.8) | (7.8) | (8.0) | (7.6) | (8.3) | (8.3) |

*During the year ending 31 March 2010, the Group did not contract any non-audit services from its external auditor, the National Audit Office (NAO).
During the year ending 31 March 2009, the Group did not contract any non-audit services from the NAO.
During the year ending 31 March 2008, the Trading Fund contracted the following non-audit services from the NAO: advice on identifying suitable Key Targets for which no fee was paid.

## 4 Key corporate financial target

The Trading Fund defines its Return On Capital Employed (ROCE) as follows:

a Return – modified historical cost profit on ordinary activities before interest and dividends
b Capital employed – average net assets, being total assets less current and non-current liabilities but excluding provisions
The ROCE target set by MOD is to achieve a five-year average of 3.5 per cent during the period from 1 April 2009 to 31 March 2014.
An internal target to achieve a ROCE of (0.9) per cent for 2009/10 was set.
The annual ROCE calculation is:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Profit/(loss) on ordinary activities before interest and taxation | 20.9 | (3.8) | 13.5 | 21.6 | (3.1) | 14.1 |
| Total assets less current liabilities (excluding provisions) | 267.4 | 257.0 | 266.1 | 268.8 | 257.7 | 265.5 |
| Less: non-current liabilities (excluding provisions) | (29.2) | (22.5) | (0.1) | (29.2) | (22.5) | – |
| Capital employed at year end | 238.2 | 234.5 | 266.0 | 239.6 | 235.2 | 265.5 |
| Average capital employed during the year | 236.4 | 250.3 | 254.6 | 237.4 | 250.4 | 253.7 |
| **ROCE** | **8.8%** | **(1.5%)** | **5.3%** | **9.1%** | **(1.2%)** | **5.6%** |

The average ROCE for the period 1 April 2009 to 31 March 2010 is:

| | 1 April 2009 | | 31 March 2010 | |
|---|---|---|---|---|
| | Group £ million | Trading Fund £ million | Group £ million | Trading Fund £ million |
| Average profit on ordinary activities before interest and taxation for the one year to 31 March 2010 | | | 20.9 | 21.6 |
| Total assets less current liabilities (excluding provisions) | 257.0 | 257.7 | 267.4 | 268.8 |
| Less: non-current liabilities (excluding provisions) | (22.5) | (22.5) | (29.2) | (29.2) |
| Capital employed at year end | 234.5 | 235.2 | 238.2 | 239.6 |
| Average capital employed during the period | | | 236.4 | 237.4 |
| **ROCE** | | | **8.8%** | **9.1%** |

## 5 Trading Fund Board members' emoluments

Details of members' emoluments are shown in the Remuneration Report.
They are summarised as follows:

| | 2010 £'000 | 2009 £'000 | 2008 £'000 |
|---|---|---|---|
| **Salaries, NCPAs and fees** | **1,028.0** | **805.7** | **845.0** |

## 6 Employee information

The average number of persons (including members of the Board) employed during the year was:

| | 2010 Group Number | 2009 Group Number | 2008 Group Number | 2010 Trading Fund Number | 2009 Trading Fund Number | 2008 Trading Fund Number |
|---|---|---|---|---|---|---|
| Professional and technical staff | 2,885 | 2,751 | 2,669 | 2,874 | 2,741 | 2,659 |
| Administrative and industrial staff | 647 | 628 | 652 | 645 | 626 | 649 |
| Secondees | 104 | 89 | 99 | 104 | 89 | 99 |
| **Total** | **3,636** | **3,468** | **3,420** | **3,623** | **3,456** | **3,407** |

In addition, there were 1,019 (2008/09: 995 and 2007/08: 912) agency and contract staff utilised during the year at a cost of £15.9 million (2008/09: £19.4 million and 2007/08: £14.8 million). Staff costs incurred during the year in respect of these employees were:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Wages and salaries | 130.1 | 122.7 | 115.6 | 129.5 | 122.1 | 115.0 |
| Social security costs | 10.6 | 10.2 | 9.7 | 10.5 | 10.1 | 9.6 |
| Other pension costs | 23.6 | 23.5 | 22.3 | 23.5 | 23.5 | 22.2 |
| **Total** | **164.3** | **156.4** | **147.6** | **163.5** | **155.7** | **146.8** |

The employees of Dstl are eligible to be members of the Principal Civil Service Pension Scheme (PCSPS), which is a final salary scheme. The PCSPS is an unfunded multi-employer defined benefit scheme but Dstl is unable to identify its share of the underlying assets and liabilities.
A full actuarial valuation was carried out at 31 March 2007. Details can be found in the resource accounts of the Cabinet Office; Civil Superannuation (www.civilservice-pensions.gov.uk). For 2009/10, normal employers' contributions of £23.5 million were payable to the PCSPS (2008/09: £23.5 million and 2007/08: £22.1 million) at one of four rates in the range 17.1 per cent to 25.5 per cent of pensionable pay (2008/09: 17.1 per cent to 25.5 per cent and 2007/08: 17.1 per cent to 25.5 per cent). The scheme's Actuary reviews employer contributions every four years following a full scheme valuation. From 2009/10, the rates will be in the range 16.7 per cent to 24.3 per cent. The contribution rates are set to meet the cost of the benefits accruing during 2009/10 to be paid when the member retires, and not the benefits paid during this period to existing pensioners.
Employees can opt to open a partnership pension account, a stakeholder pension with an employer contribution. Employers' contributions of £144,746 were paid to one or more of a panel of three appointed stakeholder pension providers. Employer contributions are age related and range from 3 per cent to 12.5 per cent of pensionable pay. Employers also match employee contributions up to 3 per cent of pensionable pay. In addition, employer contributions of £9,862, representing 0.8 per cent of pensionable pay, were payable to the PCSPS to cover the cost of the future provision of lump sum benefits on death in service, and ill-health retirement of these employees.
Contributions due to the partnership pension providers at 31 March 2010 were £11,671. There were no prepaid contributions at that date.
One person retired early on ill-health grounds; the total additional accrued pension liabilities in the year amounted to £1,390 for this individual.

## 7 Finance income

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Interest received and receivable from bank accounts and short-term deposits | 0.1 | 1.8 | 4.6 | 0.1 | 1.8 | 4.6 |
| **Total** | **0.1** | **1.8** | **4.6** | **0.1** | **1.8** | **4.6** |

Interest received and receivable has arisen from financial assets classified as loans and loan receivables. These are primarily short-term investments held at fixed interest rates.

## 8 Finance expense

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Interest paid and payable on loans | 1.2 | 0.6 | – | 1.2 | 0.6 | – |
| Financial instrument remeasurements | – | 0.3 | – | – | 0.3 | – |
| **Total** | **1.2** | **0.9** | **–** | **1.2** | **0.9** | **–** |

Of this, £17,839 relates to payments made under the Late Payments of Commercial Debts (Interest) Act 1998. Interest paid and payable has arisen from financial liabilities classified as other financial liabilities measured at amortised cost. This is primarily interest payable on the loan. See Notes 18 and 20 for further information.

## 9 Taxation

The Trading Fund is not subject to income or corporation tax in the UK under Section 829(2) of the Income and Corporation Taxes Act 1988, and consequently the requirements to account for current tax and deferred tax under IAS12 are not relevant to the Trading Fund.
However, Ploughshare Innovations Limited is liable to pay corporation tax in the UK on its taxable profits. During the year, Ploughshare Innovations Limited made a trading loss. No provisions for deferred tax has been made.

## 10 Dividends

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Ordinary dividend payable | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Special dividend payable | 1.0 | 25.0 | – | 1.0 | 25.0 | – |
| **Total** | **4.0** | **28.0** | **3.0** | **4.0** | **28.0** | **3.0** |

Dividends payable to MOD are set by agreement with the Secretary of State.

# 11 Property, plant and equipment 2010

Group and Trading Fund

The accounting policy for property, plant and equipment is covered in Note 1. Property, plant and equipment movements during the year were as follows:

| | Freehold land £ million | Freehold buildings £ million | Legacy facilities £ million | Plant and machinery £ million | Computers and office equipment £ million | Assets under construction £ million | Total £ million |
|---|---|---|---|---|---|---|---|
| **Valuations and gross modified historic cost:** | | | | | | | |
| Balance at 1 April 2009 | 21.9 | 146.2 | 0.1 | 71.2 | 5.8 | 11.0 | 256.2 |
| Additions | – | – | – | 0.3 | – | 29.1 | 29.4 |
| Disposals | – | (0.1) | – | (3.2) | (0.2) | – | (3.5) |
| Transfers | – | 0.1 | – | 0.7 | 1.8 | (2.6) | – |
| Revaluations | 0.4 | (11.3) | – | 1.2 | 1.1 | – | (8.6) |
| **Balance at 31 March 2010** | **22.3** | **134.9** | **0.1** | **70.2** | **8.5** | **37.5** | **273.5** |
| | | | | | | | |
| **Depreciation:** | | | | | | | |
| Balance at 1 April 2009 | – | (15.7) | (0.1) | (42.6) | (1.2) | – | (59.6) |
| Charge for year: | | | | | | | |
| historical | – | (5.2) | – | (3.7) | (2.2) | – | (11.1) |
| supplementary | – | – | – | (0.6) | (0.5) | – | (1.1) |
| downward revaluation | – | 1.0 | – | – | – | – | 1.0 |
| impairment | – | (0.7) | – | (1.2) | – | – | (1.9) |
| Disposals | – | – | – | 3.2 | 0.2 | – | 3.4 |
| Revaluations | – | 2.0 | – | – | – | – | 2.0 |
| **Balance at 31 March 2010** | **–** | **(18.6)** | **(0.1)** | **(44.9)** | **(3.7)** | **–** | **(67.3)** |
| | | | | | | | |
| Net modified historic cost: | | | | | | | |
| **Balance at 31 March 2010** | **22.3** | **116.3** | **–** | **25.3** | **4.8** | **37.5** | **206.2** |
| Balance at 1 April 2009 | 21.9 | 130.5 | – | 28.6 | 4.6 | 11.0 | 196.6 |

Land and buildings are subject to a quinquennial revaluation by an independent, professional valuer in accordance with IAS16.
Land at Pyestock is valued annually. The latest valuation was carried out as at 31 January 2010 on a Market Value basis by Knight Frank LLP, Chartered Surveyors.
Portsdown Main was valued as at 31 January 2010 on a Market Value basis by Knight Frank LLP.
All other land and building assets at Porton Down and Portsdown West are valued on a rolling basis by GVA Grimley Limited, Chartered Surveyors. All land and building assets were valued during the periods ending 31 March 2007, 2008 and 2009. All land and building assets are being valued over the five years beginning 1 April 2009. One quarter of the building assets at Porton Down was valued as at 31 March 2010.
The land and building assets at Portsdown West were revalued as at 31 March 2008.
The published figures for land and buildings include:
– a professional external valuation of the land at Pyestock as at 31 January 2010
– a professional external valuation of Portsdown Main as at 31 January 2010
– a professional external valuation of the land and building assets at Portsdown West as at 31 March 2008
– a professional external valuation of the land at Porton Down as at 31 March 2009
– a professional external valuation of all the building assets at Porton Down in three approximate equal segments during the periods ending 31 March 2007, 2008, and 2009
– a professional external valuation of a quarter of the building assets at Porton Down as at 31 March 2010.
The basis of the valuation for the land at Pyestock and Portsdown Main was Market Value. The valuation of Portsdown Main, which is reported as an asset under construction, did not change. The basis of the valuation for Porton Down was Market Value using the DRC method. The basis of the valuation for Portsdown West was the EUV method but, where there are buildings of a specialist design and purpose, the DRC method was applied. Due to the new and extensive specialised building construction at the Portsdown West site and, due to the size and location of the site, the independent valuers have stated that valuation on a DRC basis would be appropriate for the next valuation (due 31 March 2013).
In the event of Porton Down and Portsdown West being marketed for an alternative use to their current purpose, it is likely that the values would be materially lower than the reported figures. Included within freehold land and freehold buildings are properties from which rental income is derived. These are not material and are not disclosed separately.
The Trading Fund performs an annual business-in-use valuation on its Category Four Containment Facility, which is reported within the figures for freehold buildings, plant and machinery, and assets in construction. Three scenarios were modelled based on the capacity support income from MOD to maintain the facility. These resulted in a weighted average valuation of £10.6 million, as set out below.

| Scenario: | Life years | Discount factor % | Value £ million | Weighting % | Weighted average value £ million |
|---|---|---|---|---|---|
| 1. Capacity support capped at underlying level of £3.8 million | 25 | 3.5 | 11.5 | 25 | 2.9 |
| 2. Capacity support increased by £0.4 million from 1 April 2011 | 25 | 3.5 | 13.9 | 50 | 6.9 |
| 3. Decline of capacity support by £0.2 million per annum from 1 April 2015 | 25 | 3.5 | 3.1 | 25 | 0.8 |
| | | | | | 10.6 |

The business-in-use valuation extended over a period of 25 years, and cash flows were discounted at a rate of return of 3.5 per cent.
The impairment is disclosed as £0.6 million for buildings and £1.2 million for plant and machinery.

## Property, plant and equipment 2009

The comparatives for the year ended 31 March 2009 are:

| | Freehold land £ million | Freehold buildings £ million | Legacy facilities £ million | Plant and machinery £ million | Computers and office equipment £ million | Assets under construction £ million | Total £ million |
|---|---|---|---|---|---|---|---|
| **Valuations and gross modified historic cost:** | | | | | | | |
| Balance at 1 April 2008 | 26.5 | 81.9 | 0.3 | 62.8 | 1.5 | 55.3 | 228.3 |
| Additions | – | – | – | 0.1 | – | 43.1 | 43.2 |
| Disposals | – | (1.0) | (0.2) | (1.1) | (0.4) | – | (2.7) |
| Transfers | – | 72.8 | – | 9.0 | 4.7 | (86.5) | – |
| Revaluations | (4.6) | (7.5) | – | 0.4 | – | – | (11.7) |
| Impairment | – | – | – | – | – | (0.9) | (0.9) |
| **Balance at 31 March 2009** | **21.9** | **146.2** | **0.1** | **71.2** | **5.8** | **11.0** | **256.2** |
| | | | | | | | |
| **Depreciation:** | | | | | | | |
| Balance at 1 April 2008 | – | (18.5) | (0.3) | (39.9) | (1.0) | – | (59.7) |
| Charge for year: | | | | | | | |
| historical | – | (3.4) | – | (3.3) | (0.6) | – | (7.3) |
| supplementary | – | – | – | (0.4) | – | – | (0.4) |
| downward revaluation | – | 1.0 | – | – | – | – | 1.0 |
| Disposals | – | 0.9 | 0.2 | 1.0 | 0.4 | – | 2.5 |
| Revaluations | – | 4.3 | – | – | – | – | 4.3 |
| **Balance at 31 March 2009** | **–** | **(15.7)** | **(0.1)** | **(42.6)** | **(1.2)** | **–** | **(59.6)** |
| | | | | | | | |
| Net modified historic cost: | | | | | | | |
| **Balance at 31 March 2009** | **21.9** | **130.5** | **–** | **28.6** | **4.6** | **11.0** | **196.6** |
| Balance at 1 April 2008 | 26.5 | 63.4 | – | 22.9 | 0.5 | 55.3 | 168.6 |

## 12 Non-current financial assets

Available for sale investments:

| | Trading Fund Subsidiary undertaking £ million | Trading Fund investment and associate £ million | Trading Fund Total £ million | Group investments and associate £ million | Group Total £ million |
|---|---|---|---|---|---|
| **Cost or valuation:** | | | | | |
| Balance at 1 April 2009 | – | 1.4 | 1.4 | 2.9 | 2.9 |
| Disposals | – | – | – | (0.1) | (0.1) |
| Revaluations | – | 0.5 | 0.5 | 0.5 | 0.5 |
| **Balance at 31 March 2010** | **–** | **1.9** | **1.9** | **3.3** | **3.3** |

A professional independent valuation of the available-for-sale investments has been obtained by Ploughshare Innovations Limited and Dstl. These valuations have been adopted by the Board, and have been incorporated into the Group accounts on consolidation of the subsidiary undertaking. The valuations of other holdings in available-for-sale investments owned by Ploughshare Innovations Limited, and incorporated within these Group financial statements, include Claresys Limited, Esroe Limited, ProKyma Technologies Limited, Remo Technologies Limited, Subsea Asset Location Technologies Limited and Sherwood Therapeutics Limited. During the year, Alaska Food Diagnostics Limited ceased trading. Ploughshare Innovations Limited has impaired the value of its holding to zero. During the year, Ploughshare Innovations Limited disposed of some of its holdings in its joint venture with Subsea Asset Location Technologies Limited. A profit of £0.3 million was realised.
Enigma Diagnostics Limited remains as the only available-for-sale investment where the Trading Fund has some direct ownership of beneficial interests. The investment has been valued by a professional independent valuer. The valuation has been adopted by the Board. The independent valuations were performed by a Fellow of the Institute of Chartered Accountants in England and Wales.

Further details of the subsidiary, joint venture and associate owned directly by the Trading Fund as at 31 March 2010 are shown below:

| Name of company | Principal area of operation and country of incorporation | Proportion of voting rights and shares held | Class of shares held | Last financial year ended | Turnover £ million | (Loss) for year £ million | Total assets £ million | Total liabilities £ million | Aggregate capital & reserves £ million | Nature of business |
|---|---|---|---|---|---|---|---|---|---|---|
| **Subsidiary** | | | | | | | | | | |
| Ploughshare Innovations Limited | Great Britain | 100.0% | Ordinary of £1 | 31 March 2010 | 1.4 | (0.7) | 4.0 | 3.8 | 0.2 | Management of technology transfer |
| **Available for sale investment (joint venture)** | | | | | | | | | | |
| Enigma Diagnostics Limited | Great Britain | 9.2% | Ordinary of 10p/ Preferred ordinary of 1p | 30 April 2009 | 4.7 | (6.7) | 6.9 | 3.0 | 3.9 | R&D |

Management accounts for 11 months to 31 March 2010, adjusted for 12 months, have been used because audited accounts were not available.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Associate** | | | | | | | | | | |
| Tetricus Limited | Great Britain | 33.3% | Ordinary C of £1 | 31 March 2010 | 0.3 | – | 0.4 | 0.2 | 0.2 | Business support to biotechnology start-ups |

Management accounts for 12 months to the year ended 31 March 2010 have been used for the disclosure because audited accounts were not available.

The comparatives for the year ended 31 March 2009 are:

| | Trading Fund Subsidiary undertaking £ million | Trading Fund investment and associate £ million | Trading Fund Total £ million | Group investments and associate £ million | Group Total £ million |
|---|---|---|---|---|---|
| **Cost or valuation:** | | | | | |
| Balance at 1 April 2008 | – | 0.9 | 0.9 | 2.9 | 2.9 |
| Revaluations | – | 0.5 | 0.5 | – | – |
| **Balance at 31 March 2009** | **–** | **1.4** | **1.4** | **2.9** | **2.9** |

Further details of the subsidiary, joint venture and associate owned directly by the Trading Fund as at 31 March 2009 are shown below:

| Name of company | Principal area of operation and country of incorporation | Proportion of voting rights and shares held | Class of shares held | Last financial year ended | Turnover £ million | (Loss) for year £ million | Total assets £ million | Total liabilities £ million | Aggregate capital & reserves £ million | Nature of business |
|---|---|---|---|---|---|---|---|---|---|---|
| **Subsidiary** | | | | | | | | | | |
| Ploughshare Innovations Limited | Great Britain | 100.0% | Ordinary of £1 | 31 March 2009 | 1.1 | (0.7) | 2.4 | 2.7 | (0.3) | Management of technology transfer |
| **Available for sale investment (joint venture)** | | | | | | | | | | |
| Enigma Diagnostics Limited | Great Britain | 10.9% | Ordinary of 10p/ Preferred ordinary of 1p | 30 April 2008 | – | (5.4) | 2.5 | 3.7 | (1.2) | R&D |

Management accounts for 11 months to 31 March 2009, adjusted for 12 months, have been used for the disclosure because audited accounts were not available.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Associate** | | | | | | | | | | |
| Tetricus Limited | Great Britain | 33.3% | Ordinary C of £1 | 31 March 2009 | 0.3 | – | 0.5 | 0.2 | 0.3 | Business support to biotechnology start-ups |

Management accounts for 12 months to the year ended 31 March 2009 have been used for the disclosure because audited accounts were not available.

## 13 Intangible assets

Group and Trading Fund

The accounting policy for intangible assets is covered in Note 1.
Intangible asset movements during the year were:

| | Purchased software licences £ million | Software assets under construction £ million | Total £ million |
|---|---|---|---|
| **Gross modified historic cost:** | | | |
| Balance at 1 April 2009 | 2.8 | – | 2.8 |
| Additions | 0.8 | 0.7 | 1.5 |
| Disposals | (0.1) | – | (0.1) |
| Revaluations | 0.2 | – | 0.2 |
| **Balance at 31 March 2010** | **3.7** | **0.7** | **4.4** |
| | | | |
| **Amortisation:** | | | |
| Balance at 1 April 2009 | (0.6) | – | (0.6) |
| Charge for year: | | | |
| historical | (1.0) | – | (1.0) |
| supplementary | (0.1) | – | (0.1) |
| Impairment | (0.1) | – | (0.1) |
| **Balance at 31 March 2010** | **(1.8)** | **–** | **(1.8)** |
| | | | |
| Net book value: | | | |
| **Balance at 31 March 2010** | **1.9** | **0.7** | **2.6** |
| Balance at 1 April 2009 | 2.2 | – | 2.2 |

The comparatives for the year ended 31 March 2009 are:

| | Purchased software licences £ million | Software assets under construction £ million | Total £ million |
|---|---|---|---|
| **Gross modified historic cost:** | | | |
| Balance at 1 April 2008 | 2.0 | – | 2.0 |
| Additions | 2.3 | – | 2.3 |
| Disposals* | (1.5) | – | (1.5) |
| **Balance at 31 March 2009** | **2.8** | **–** | **2.8** |
| | | | |
| **Amortisation:** | | | |
| Balance at 1 April 2008 | (1.3) | – | (1.3) |
| Charge for year: | | | |
| historical | (0.7) | – | (0.7) |
| Disposals* | 1.4 | – | 1.4 |
| **Balance at 31 March 2009** | **(0.6)** | **–** | **(0.6)** |
| | | | |
| Net book value: | | | |
| **Balance at 31 March 2009** | **2.2** | **–** | **2.2** |
| Balance at 1 April 2008 | 0.7 | – | 0.7 |

*Please note that the disposal relates to the replacement of a Microsoft Enterprise Agreement that had expired during the financial year ended 31 March 2009.

## 14 Impairments

Impairments occurring during the year were either charged to the Statement of Income and Expenditure or taken through revaluation surplus as follows:

| Group | Note | 2010 Statement of Income and Expenditure £ million | 2009 Statement of Income and Expenditure £ million | 2008 Statement of Income and Expenditure £ million | 2010 Revaluation surplus £ million | 2009 Revaluation surplus £ million | 2008 Revaluation surplus £ million |
|---|---|---|---|---|---|---|---|
| Investment in Alaska Food Diagnostics Limited | 12 | – | – | – | 0.4 | 0.6 | – |
| Investment in P2i Limited | 12 | – | – | – | – | 0.3 | 1.6 |
| Investment in Remo Technologies Limited | 12 | – | – | – | – | 0.3 | – |
| Portsdown Main site | 11 | – | 0.9 | 1.3 | – | – | – |
| Land at Pyestock | 11 | – | – | – | 0.3 | 1.5 | 0.6 |
| Category Four Containment Facility | 11 | 1.8 | – | 0.6 | – | – | – |
| Land at Porton Down | 11 | – | – | – | – | 0.8 | – |
| Buildings at Porton Down (including MHCA*) | 11 | 0.1 | 0.1 | – | 12.5 | 0.1 | 0.1 |
| Computer equipment (MHCA) | 11 | (0.6) | – | – | – | – | – |
| Software licence | 13 | 0.1 | – | – | – | – | – |
| **Total** | | **1.4** | **1.0** | **1.9** | **13.2** | **3.6** | **2.3** |

| Trading Fund | Note | 2010 Statement of Income and Expenditure £ million | 2009 Statement of Income and Expenditure £ million | 2008 Statement of Income and Expenditure £ million | 2010 Revaluation surplus £ million | 2009 Revaluation surplus £ million | 2008 Revaluation surplus £ million |
|---|---|---|---|---|---|---|---|
| Portsdown Main site | 11 | – | 0.9 | 1.3 | – | – | – |
| Land at Pyestock | 11 | – | – | – | 0.3 | 1.5 | 0.6 |
| Category Four Containment Facility | 11 | 1.8 | – | 0.6 | – | – | – |
| Land at Porton Down | 11 | – | – | – | – | 0.8 | – |
| Buildings at Porton Down (including MHCA) | 11 | 0.1 | 0.1 | – | 12.5 | 0.1 | 0.1 |
| Computer equipment (MHCA) | 11 | (0.6) | – | – | – | – | – |
| Software licence | 13 | 0.1 | – | – | – | – | – |
| **Total** | | **1.4** | **1.0** | **1.9** | **12.8** | **2.4** | **0.7** |

## 15 Work in progress

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Central government bodies | 1.9 | 2.1 | 5.8 | 1.9 | 2.2 | 5.8 |
| Trading funds | – | 0.1 | – | – | 0.1 | 0.3 |
| Local authorities | 0.1 | – | – | 0.1 | – | – |
| Non-public sector organisations | 0.6 | 0.7 | 1.8 | 0.6 | 0.7 | 1.8 |
| **Total** | **2.6** | **2.9** | **7.6** | **2.6** | **3.0** | **7.9** |

*Modified Historic Cost Accounting.

## 16 Trade receivables and other current assets

Amounts falling due within one year:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Trade receivables | 25.3 | 33.7 | 24.1 | 25.2 | 33.5 | 23.9 |
| Central government bodies | 22.8 | 30.0 | 18.6 | 22.8 | 30.0 | 18.5 |
| NHS Trusts | – | – | 0.1 | – | – | 0.1 |
| Non-public sector organisations | 2.5 | 3.7 | 5.4 | 2.4 | 3.5 | 5.3 |
| Amounts recoverable under contracts | 98.7 | 97.9 | 102.8 | 98.7 | 97.9 | 102.8 |
| Central government bodies | 98.0 | 95.9 | 102.1 | 98.0 | 95.9 | 102.1 |
| Non-public sector organisations | 0.7 | 2.0 | 0.7 | 0.7 | 2.0 | 0.7 |
| Deposits and advances – staff receivables | 0.2 | 0.7 | 0.5 | 0.2 | 0.7 | 0.5 |
| Other receivables | 0.9 | 1.2 | 1.1 | 0.9 | 1.2 | 1.1 |
| Central government bodies | 0.6 | 0.5 | 0.7 | 0.6 | 0.5 | 0.7 |
| Non-public sector organisations | 0.3 | 0.7 | 0.4 | 0.3 | 0.7 | 0.4 |
| Prepayments and accrued income | 3.0 | 4.7 | 4.0 | 2.9 | 4.6 | 3.9 |
| Central government bodies | – | – | 0.1 | – | – | 0.1 |
| Local authorities | – | 0.2 | – | – | 0.2 | – |
| Non-public sector organisations | 3.0 | 4.5 | 3.9 | 2.9 | 4.4 | 3.8 |
| **Total** | **128.1** | **138.2** | **132.5** | **127.9** | **137.9** | **132.2** |
| | | | | | | |
| Amounts falling due after more than one year: | | | | | | |
| Deposits and advances – staff receivables | 0.7 | – | – | 0.7 | – | – |
| Other receivables | – | – | – | 3.1 | 2.3 | 1.3 |
| Central government bodies | – | – | – | 3.1 | 2.3 | 1.3 |
| Loan due from Ploughshare Innovations Limited | – | – | – | 0.2 | 0.1 | – |
| **Total** | **0.7** | **–** | **–** | **4.0** | **2.4** | **1.3** |

The loan due from Ploughshare Innovations Limited was put in place from 6 April 2008, set at an interest rate of the base rate plus 2 per cent. The loan arrangement is on demand, with a total limit set at £500,000. The loan will be repayable on the third anniversary of the agreement, which is 6 April 2011.

Within the Trading Fund's other receivables falling due after more than one year is a current account with Ploughshare Innovations Limited of £3.1 million (2008/09: £2.3 million; 2007/08: £1.3 million). The balance on this account represents amounts due for services provided. There is no intention to demand payment during the next year.

## 17 Cash and cash equivalents

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Balance brought forward | 30.4 | 59.6 | 87.9 | 30.3 | 59.4 | 87.2 |
| Net change in cash and cash equivalent balances | 9.9 | (29.2) | (28.3) | 9.4 | (29.1) | (27.8) |
| **Balance carried forward** | **40.3** | **30.4** | **59.6** | **39.7** | **30.3** | **59.4** |
| | | | | | | |
| The following balances were held at: | | | | | | |
| Commercial banks and cash in hand | 0.3 | 0.8 | 0.9 | 0.3 | 0.8 | 0.9 |
| Short-term investments | 40.0 | 29.6 | 58.7 | 39.4 | 29.5 | 58.5 |
| **Balance carried forward** | **40.3** | **30.4** | **59.6** | **39.7** | **30.3** | **59.4** |

## 18 Trade payables and other liabilities

Amounts falling due within one year:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| Current part of long-term loan payable to MOD | 3.2 | – | – | 3.2 | – | – |
| VAT | 9.5 | 3.5 | 4.3 | 9.5 | 3.5 | 4.3 |
| Other taxation and social security | 5.1 | 5.3 | 5.1 | 5.1 | 5.3 | 5.1 |
| Payments received on account | 16.4 | 12.3 | 9.4 | 16.4 | 12.3 | 9.4 |
| Central government bodies | 12.9 | 8.5 | 5.6 | 12.9 | 8.5 | 5.6 |
| Non-public sector organisations | 3.5 | 3.8 | 3.8 | 3.5 | 3.8 | 3.8 |
| Trade payables | 7.1 | 24.4 | 18.6 | 7.0 | 24.4 | 18.6 |
| Central government bodies | 0.1 | 1.2 | 0.8 | 0.1 | 1.2 | 0.8 |
| NHS Trusts | – | 0.1 | – | – | 0.1 | – |
| Non-public sector organisations | 7.0 | 23.1 | 17.8 | 6.9 | 23.1 | 17.8 |
| Other payables | 5.8 | 6.0 | 3.9 | 5.8 | 6.0 | 3.8 |
| Central government bodies | 4.4 | 4.8 | 3.6 | 4.4 | 4.8 | 3.6 |
| Non-public sector organisations | 1.4 | 1.2 | 0.3 | 1.4 | 1.2 | 0.2 |
| Pay and expenses – staff payables | 3.5 | 4.2 | 4.3 | 3.5 | 4.1 | 4.2 |
| Accruals and deferred income | 61.8 | 57.5 | 57.2 | 61.6 | 57.5 | 57.1 |
| Central government bodies | 2.9 | 3.8 | 3.3 | 2.9 | 3.8 | 3.3 |
| Trading funds | – | – | 0.2 | – | – | 0.2 |
| NHS Trusts | 0.1 | 0.1 | – | 0.1 | 0.1 | – |
| Local authorities | 4.3 | 1.9 | 1.3 | 4.3 | 1.9 | 1.3 |
| Non-public sector organisations | 54.5 | 51.7 | 52.4 | 54.3 | 51.7 | 52.3 |
| Dividend | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 |
| **Total** | **116.4** | **116.2** | **105.8** | **116.1** | **116.1** | **105.5** |

Amounts falling due after more than one year:

| | 2010 Group £ million | 2009 Group £ million | 2008 Group £ million | 2010 Trading Fund £ million | 2009 Trading Fund £ million | 2008 Trading Fund £ million |
|---|---|---|---|---|---|---|
| MOD loan | 29.0 | 21.5 | – | 29.0 | 21.5 | – |
| Other payables | – | 0.7 | – | – | 0.7 | – |
| Non-public sector organisations | – | 0.7 | – | – | 0.7 | – |
| Accruals and deferred income | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 | – |
| Central government bodies | – | – | 0.1 | – | – | – |
| Non-public sector organisations | 0.2 | 0.3 | – | 0.2 | 0.3 | – |
| **Total** | **29.2** | **22.5** | **0.1** | **29.2** | **22.5** | **–** |

£21.5 million of the long-term loan was provided by MOD on 11 September 2008. A further £10.7 million was provided by MOD on 15 October 2009. The first repayment of the principal is due on 30 September 2010 and final repayment is due on 31 March 2020. With the exception of long-term loans, long-term creditors are held undiscounted.

## 19 Provisions for liabilities and charges

Group and Trading Fund

| | Infrastructure maintenance and upgrades £ million | i lab provisions £ million | Onerous contracts £ million | Contractual disputes £ million | Early departure costs £ million | Total £ million |
|---|---|---|---|---|---|---|
| Balance at 1 April 2009 | 4.3 | 5.6 | 1.9 | – | 1.2 | 13.0 |
| Provided in the year | – | 2.1 | 0.6 | 0.2 | 0.4 | 3.3 |
| Provisions not required written-back | (1.6) | (0.4) | (0.5) | – | – | (2.5) |
| Provisions utilised in the year | (1.5) | (4.5) | (0.5) | (0.1) | (0.7) | (7.3) |
| **Balance at 31 March 2010** | **1.2** | **2.8** | **1.5** | **0.1** | **0.9** | **6.5** |

Analysis of expected timing of discounted cash flows:

| | Infrastructure maintenance and upgrades £ million | i lab provisions £ million | Onerous contracts £ million | Contractual disputes £ million | Early departure costs £ million | Total £ million |
|---|---|---|---|---|---|---|
| Between 1 April 2010 and 31 March 2011 | 1.2 | 1.1 | 0.3 | 0.1 | 0.4 | 3.1 |
| Between 1 April 2011 and 31 March 2012 | – | 0.4 | 0.2 | – | 0.2 | 0.8 |
| Between 1 April 2012 and 31 March 2017 | – | 1.2 | – | – | 0.3 | 1.5 |
| Between 1 April 2017 and 31 March 2022 | – | 0.1 | 1.0 | – | – | 1.1 |
| From 1 April 2022 thereafter | – | – | – | – | – | – |
| **Balance at 31 March 2010** | **1.2** | **2.8** | **1.5** | **0.1** | **0.9** | **6.5** |

No amounts are expected to be called after 1 April 2022 and therefore no further analysis is necessary for amounts after this date.

**Infrastructure maintenance and upgrades**

A provision is recognised for certain infrastructure maintenance and upgrades where the Trading Fund is legally responsible for the infrastructure concerned and there is a clear legal or constructive obligation resulting in an expected transfer of economic benefits. The timing for the transfer of economic benefits for the remaining amount is expected to be completed before the end of March 2011. The provision has been calculated using an estimate provided by a firm of civil and structural engineers, uplifted using an appropriate index provided by the ONS.

**i lab provisions**

Onerous contracts exist where the Trading Fund had provided guaranteed selling prices for the homes of qualifying employees who are relocating due to a change in their permanent place of work. Due to market conditions, selling prices were falling short of their guaranteed price. This provision has been utilised. Due to relocation, particularly from the Farnborough site, there have been redundancies for some non-mobile staff. There are therefore some early departure costs as a direct consequence of i lab.

**Onerous contracts**

Provisions for onerous leases are recognised where unavoidable costs of meeting the lease obligations exceed the economic benefits expected to be received under the lease.

The Trading Fund occupied a site at Farnborough under the terms of an operating lease. On exit from this lease during 2009/10, the Trading Fund had an obligation, under dilapidation terms of the contract, to repair and refurbish the previously occupied areas of the site. This provision was utilised before the end of March 2010.

A provision was created during the year for dilapidations under the terms of an operating lease for the Winfrith site.

The Trading Fund pays a peppercorn rent to locate a facility at Pershore. There is a dilapidation obligation on removal of the facility, which is likely to occur in the next financial year. A lease for a facility, owned by the Trading Fund, to remain at the Farnborough site is in place. This defers a further dilapidation obligation under the Farnborough lease to beyond a year.

**Contractual disputes**

During the year, there have been some contractual disputes where a negotiated agreement has been settled or compensation has been agreed.

**Early departure costs**

The Trading Fund meets the additional costs of benefits beyond the normal PCSPS benefits in respect of employees who retire early by paying the required amounts annually to the PCSPS over the period between early departure and normal retirement date. The Trading Fund provides for this in full when the early retirement programme becomes binding. Payment values are established by the People, Pay and Pensions Agency (PPPA).

First-time adoption of IFRS has been used as a convenient start point for reclassifying early departure liabilities as provisions. These had previously been disclosed within trade and other payables.

The comparatives for the year ended 31 March 2009 are:
Group and Trading Fund

| | Infrastructure maintenance and upgrades £ million | i lab provisions £ million | Onerous contracts £ million | Contractual disputes £ million | Early departure costs £ million | Total £ million |
|---|---|---|---|---|---|---|
| Balance at 1 April 2008 | 4.6 | – | 0.9 | – | 1.3 | 6.8 |
| Provided in the year | – | 5.6 | 1.2 | – | 3.1 | 9.9 |
| Provisions not required written-back | (0.3) | – | – | – | – | (0.3) |
| Provisions utilised in the year | – | – | (0.2) | – | (3.2) | (3.4) |
| **Balance at 31 March 2009** | **4.3** | **5.6** | **1.9** | **–** | **1.2** | **13.0** |

Analysis of expected timing of discounted cash flows:

| | Infrastructure maintenance and upgrades £ million | i lab provisions £ million | Onerous contracts £ million | Contractual disputes £ million | Early departure costs £ million | Total £ million |
|---|---|---|---|---|---|---|
| Between 1 April 2009 and 31 March 2010 | 4.3 | 4.9 | 0.9 | – | 0.5 | 10.6 |
| Between 1 April 2010 and 31 March 2011 | – | 0.2 | – | – | 0.3 | 0.5 |
| Between 1 April 2011 and 31 March 2016 | – | 0.5 | – | – | 0.3 | 0.8 |
| Between 1 April 2016 and 31 March 2021 | – | – | 1.0 | – | 0.1 | 1.1 |
| From 1 April 2021 thereafter | – | – | – | – | – | – |
| **Balance at 31 March 2009** | **4.3** | **5.6** | **1.9** | **–** | **1.2** | **13.0** |

No amounts are expected to be called after 1 April 2021 and therefore no further analysis is necessary for amounts after this date.

## 20 Long-term loans

| | 2010 Group and Trading Fund £ million | 2009 Group and Trading Fund £ million | 2008 Group and Trading Fund £ million |
|---|---|---|---|
| Balance at brought forward | 21.5 | – | – |
| New loan | 10.7 | 21.5 | – |
| **Balance carried forward** | **32.2** | **21.5** | **–** |

A £21.5 million loan was received from MOD on 11 September 2008 and is repayable by instalments until 31 March 2020. Interest is charged at 4.53 per cent per annum. The interest rate is fixed for the duration of the loan. A further loan of £10.7 million was received from MOD on 15 October 2009, and is repayable by instalments until 31 March 2020. Interest is charged at 2.75 per cent per annum. The interest rate is fixed for the duration of the loan.

| | 2010 Group and Trading Fund £ million | 2009 Group and Trading Fund £ million | 2008 Group and Trading Fund £ million |
|---|---|---|---|
| Analysis of repayments: | | | |
| Within one year | 3.2 | – | – |
| After one year but within two years | 3.2 | 2.2 | – |
| After two years but within five years | 9.7 | 6.4 | – |
| After five years | 16.1 | 12.9 | – |
| **Total** | **32.2** | **21.5** | **–** |

The carrying amount of the loan, following amortisation using the effective interest rate method, is as follows:

| | 2010 Group and Trading Fund £ million | 2009 Group and Trading Fund £ million | 2008 Group and Trading Fund £ million |
|---|---|---|---|
| Balance brought forward | 22.3 | – | – |
| New loan | 10.7 | 21.5 | – |
| Movement in finance charge | 0.2 | 0.8 | – |
| **Balance carried forward** | **33.2** | **22.3** | **–** |

## 21 Commitments under leases

**Operating leases**

Commitments under non-cancellable operating leases to pay rentals during periods after 31 March 2010 are analysed as follows:

| | 2010 Group and Trading Fund £ million | 2009 Group and Trading Fund £ million | 2008 Group and Trading Fund £ million |
|---|---|---|---|
| **Property:** | | | |
| Expiry within one year | 4.4 | 6.4 | 7.4 |
| Expiry after one year but within five years | 16.5 | 16.6 | 16.7 |
| **Total** | **20.9** | **23.0** | **24.1** |
| | | | |
| **Plant and equipment:** | | | |
| Expiry within one year | 0.1 | 0.1 | 0.1 |
| **Total** | **0.1** | **0.1** | **0.1** |

The Group leases various properties, including land, under short-term cancellable operating lease agreements. There is only one significant lease, the property at Fort Halstead. To cancel the lease, a notice period of not less than five years is required of the Group. The landlord does not have a right to cancel. No renewal or purchase options exist. There is a rent review every five years, performed on a Market Value basis. The last review was performed for 1 April 2007. There is no contingent rent or any significant restrictions concerning the use of the property.

## 22 Capital commitments

| | 2010 Group and Trading Fund £ million | 2009 Group and Trading Fund £ million | 2008 Group and Trading Fund £ million |
|---|---|---|---|
| **Property, plant and equipment:** | | | |
| Capital expenditure that has been contracted for, but has not been provided for in the accounts | 7.3 | 25.2 | 51.4 |
| Capital expenditure that has been authorised, but has not been provided for in the accounts | 3.9 | 3.3 | 4.7 |

## 23 Financial instruments

Financial assets and liabilities are recognised where the Group has become a party to contractual terms of a financial instrument. The Trading Fund and its subsidiary undertaking's principal financial instruments comprise cash, short-term deposits and long-term borrowings. The main purpose of these financial instruments is to finance the Group's operations. The Group has various other financial instruments, such as trade receivables and trade payables, that arise directly from its operations. The Group has no embedded derivatives that require separation from its host contract and measurement at fair value through profit or loss, as required by IAS39. It has been the Group's policy throughout the year that no trading in financial instruments should be undertaken.

**Categories of financial instruments**

Trade and other receivables, and cash and cash equivalents, have been classified as loans and receivables. Trade and other payables have been classified as other financial liabilities. The fair value of these financial assets and financial liabilities approximates carrying value due to the short-term nature of these financial instruments. The loan received from MOD has been classified as other financial liabilities and is held at amortised cost using the effective interest rate method. The carrying value of the loan is shown in Note 20.

The main risks arising from the Group's financial instruments are liquidity risk and foreign currency risk. The Board reviews and agrees policies for managing each of these risks. These policies have remained unchanged throughout the year. A disclosure requirement of IFRS7 is to state the financial instrument that has produced finance income, and the financial instrument that has produced finance charges. The category of financial instrument that has produced finance income received and receivable, and the category of financial instrument that has produced finance charges paid and payable, is disclosed in Notes 7 and 8.

**Liquidity risk**

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of bank current account facilities and investment of surplus funds in short-term, interest-bearing accounts.

For the Group, liquidity risk primarily relates to managing payment and receipt of trade and other payables, and of trade and other receivables, arising out of normal operations. This is managed through matching of credit terms with suppliers and customers.

The following is an analysis of financial liabilities by remaining contractual maturity, as required by IFRS7:

| | Matures within 1 year £ million | Matures between 1 & 2 years £ million | Matures between 2 & 3 years £ million | Matures between 3 & 4 years £ million | Matures between 4 & 5 years £ million | Matures after more than 5 years £ million |
|---|---|---|---|---|---|---|
| Trade payables | 7.1 | – | – | – | – | – |
| Other payables: | | | | | | |
| Staff/payroll payables | 3.5 | – | – | – | – | – |
| Taxation and social security | 14.6 | – | – | – | – | – |
| Payments on account | 16.4 | – | – | – | – | – |
| Other | 5.8 | – | – | – | – | – |
| Accruals | 61.8 | 0.1 | 0.1 | – | – | – |
| Provisions | 3.1 | 0.8 | 0.5 | 0.4 | 0.3 | 1.4 |
| Loan provided by MOD: | | | | | | |
| Principal | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 16.2 |
| Dividend | 4.0 | – | – | – | – | – |
| **Total financial liabilities** | **119.5** | **4.1** | **3.8** | **3.6** | **3.5** | **17.6** |

The liquidity risks inherent to this are met by close management of the Group's financial assets. Amounts recoverable under contract are invoiced on monthly billing cycles, and the receipts are invested on short-term deposits designed to mature when liabilities fall due. The following is a maturity analysis of financial assets:

| | Matures within 1 year £ million | Matures between 1 & 2 years £ million | Matures between 2 & 3 years £ million | Matures between 3 & 4 years £ million | Matures between 4 & 5 years £ million | Matures after more than 5 years £ million |
|---|---|---|---|---|---|---|
| Work in progress | 2.6 | – | – | – | – | – |
| Trade receivables | 25.3 | – | – | – | – | – |
| Amounts recoverable under contract | 98.7 | – | – | – | – | – |
| Prepayments | 3.0 | – | – | – | – | – |
| Other receivables: | | | | | | |
| Staff receivables | 0.2 | 0.1 | 0.1 | 0.1 | – | 0.4 |
| Other | 0.9 | – | – | – | – | – |
| **Total financial assets** | **130.7** | **0.1** | **0.1** | **0.1** | **–** | **0.4** |

**Market risk**

Foreign currency risk:

The Group has limited transactional currency exposures. Such exposures arise from the sales or purchases by an operating unit in currencies other than sterling and, for staff who are posted overseas, payment of salaries in the host currency. Foreign currency contracts require approval from the Finance Director. It is the Trading Fund's policy to endeavour to include a clause that allows for the price of a foreign currency sales contract to be revised if the relevant exchange rate fluctuates by more than 2.5 per cent during the life of the contract. This clause reserves the right to revise the price but it is not routinely exercised.

The Group does not use forward currency contracts to eliminate such exposure to currency losses.

As at 31 March 2010, the Group's exposure to currency exchange movements, denominated in sterling is:

| | US Dollar £'000 | Euro £'000 |
|---|---|---|
| Assets | 1,244.7 | 6.0 |
| Liabilities | 177.3 | 0.3 |

No sensitivity analysis has been performed because the exposure to currency exchange movement risk is not material.

Interest rate risk:

There is no interest rate risk in respect of short-term investments. All investments are short term at a fixed rate.

As at 31 March 2010, the Group's investments at fixed rates are:

| Counterparty | Maturity Date | Amount invested £ million | Rate % |
|---|---|---|---|
| Lloyds TSB Bank | 1 April 2010 | 9.4 | 0.20 |
| Debt Management Office | 9 April 2010 | 2.0 | 0.25 |
| Debt Management Office | 9 April 2010 | 6.0 | 0.25 |
| Debt Management Office | 16 April 2010 | 2.0 | 0.25 |
| Lloyds TSB Bank | 16 April 2010 | 5.0 | 0.41 |
| Lloyds TSB Bank | 23 April 2010 | 7.0 | 0.32 |
| Lloyds TSB Bank | 30 April 2010 | 8.0 | 0.41 |
| HSBC Bank | On demand | 0.6 | 0.40 |

There is no interest rate risk with the two loans repayable to MOD. The interest rates are fixed.

| | Date provided | Maturity date | Principal £ million | Rate % |
|---|---|---|---|---|
| Loan from MOD | 11 September 2008 | 31 March 2020 | 21.5 | 4.53 |
| Loan from MOD | 15 October 2009 | 31 March 2020 | 10.7 | 2.75 |

**Credit risk**

Exposure to credit risk is low. All work is performed under contract terms. More than 85 per cent of trading is undertaken with the Group's immediate owner, MOD, and more than 90 per cent of trading is undertaken with Government departments, including MOD. All non-Exchequer parties are credit checked prior to contract agreement and are regularly monitored. The standard terms negotiated with both customers and suppliers is a 30-day credit period.

In accordance with IFRS7, the following disclosure provides details of the Group's trade receivables that are beyond their due date:

| 0-90 days | 91-180 days | 181-270 days | 271-360 days | over 360 days |
|---|---|---|---|---|
| £'000 | £'000 | £'000 | £'000 | £'000 |
| 8,679.2 | 807.5 | 46.6 | 604.2 | 22.1 |

No provision for bad debt has been made because there are no indications of any improbable recovery.

The maximum exposure to credit risk can be broken down as follows:

| | £ million | £ million |
|---|---|---|
| Trade receivables | | 25.3 |
| Amounts recoverable under contract | | 98.7 |
| Other receivables: | | |
| Other | 0.9 | |
| Staff loans, advances and imprests | 0.9 | |
| | | 1.8 |
| Cash and cash equivalents: | | |
| Cash at bank – Lloyds TSB Bank | 0.3 | |
| Short-term investments – Lloyds TSB Bank | 29.4 | |
| Short-term investments – Debt Management Office | 10.0 | |
| Short-term investments – HSBC Bank | 0.6 | |
| | | 40.3 |
| Maximum exposure to credit risk | | 166.1 |

This is the technical maximum quantitative exposure but, within this, £110.6 million relates to MOD. Credit risk with MOD is minimal since it is a central Government organisation, and is the Group's immediate Owner.

No capital disclosures as required by IFRS7 are necessary. A buffer for risk to creditors does not arise because public sector financing is tax based.

No further disclosure is necessary, as required by IFRS7, to enable the Group's overall financial position, performance and cash flows to be understood.

## 24 Public dividend capital

Group and Trading Fund

The FReM interprets public dividend capital as equity under IAS32.

| | 2010 £ million | 2009 £ million | 2008 £ million |
|---|---|---|---|
| Balance brought forward | 50.4 | 50.4 | 50.4 |
| Net movement in year | – | – | – |
| **Balance carried forward** | **50.4** | **50.4** | **50.4** |

## 25 Government grant reserve

Group and Trading Fund

| | 2010 £ million | 2009 £ million | 2008 £ million |
|---|---|---|---|
| Balance brought forward | – | – | – |
| Additions | 1.3 | – | – |
| Released to Statement of Income and Expenditure | – | – | – |
| **Balance carried forward** | **1.3** | **–** | **–** |

During the year, one UK Government grant was provided to the Trading Fund from the Department of Energy and Climate Change. It was provided to finance the purchase of a specific asset, and will be released to the Statement of Income and Expenditure during the useful economic life of the asset. The asset, which will be IT communications hardware, is expected to be purchased and commissioned by July 2010.

## 26 Analysis of changes in financing during the year

Group and Trading Fund

| | Note | 2010 £ million | 2009 £ million | 2008 £ million |
|---|---|---|---|---|
| Public dividend capital: | 24 | | | |
| Balance brought forward | | 50.4 | 50.4 | 50.4 |
| Net movement in year | | – | – | – |
| **Balance carried forward** | | **50.4** | **50.4** | **50.4** |
| | | | | |
| Long-term loans: | | | | |
| Balance brought forward | | 21.5 | – | – |
| New loans received during the year | | 10.7 | 21.5 | – |
| Transfer to payables falling due within one year | | (3.2) | – | – |
| **Balance carried forward** | **20** | **29.0** | **21.5** | **–** |

## 27 Losses and special payments

During the year ended 31 March 2010, there were no losses or special payments exceeding £250,000. There was one severence payment made during the year totalling £12,500, and payments relating to one unfair dismissal totalling £62,451.91.
During the year ended 31 March 2009, there were no losses or special payments exceeding £250,000. There was one severence payment made during the year totalling £12,500.

## 28 Contingent liabilities

There were no contingent liabilities at 31 March 2009 or 31 March 2010.

## 29 Related-party transactions

Dstl is a Trading Fund owned by MOD.

**MOD**

MOD is regarded as a related party. During the year, Dstl had various material transactions with MOD with all transactions carried out under contract terms and subject to the normal course of internal and external audit:

| | 2010 £ million | 2009 £ million | 2008 £ million |
|---|---|---|---|
| Sales | 385.9 | 358.9 | 327.7 |
| Purchases | 17.7 | 22.4 | 17.2 |
| Receivables | 110.6 | 113.1 | 110.5 |
| Payables | 11.3 | 11.2 | 7.4 |

An ordinary dividend of £3 million, plus a special dividend of £1 million payable to MOD, was agreed. On 15 October 2009, a further loan of £10.7 million was provided by MOD at a fixed interest rate of 2.75 per cent. Interest paid and payable on the loans totalled £1,132,257, measured at amortised cost using the effective interest rate method. First repayment of the principal is due on 30 September 2010, and final repayment is due on 31 March 2020. See Note 20.

**Ploughshare Innovations Limited**

Ploughshare Innovations Limited is a wholly owned subsidiary undertaking of the Trading Fund. Details are provided in Note 12. Inter-company trading has been eliminated on consolidation using the purchase method. During the year, the following trading occurred with Ploughshare Innovations Limited, which was carried out under contract terms:

| | 2010 £'000 | 2009 £'000 | 2008 £'000 |
|---|---|---|---|
| Sales and other operating income | 820.6 | 866.4 | 366.1 |
| Purchases and expenses | 93.6 | 267.6 | 257.3 |
| Receivables | 3,161.8 | 2,275.3 | 1,271.4 |
| Payables | 24.5 | – | – |

On 6 April 2008, a loan arrangement with Ploughshare Innovations Limited was put in place. Ploughshare Innovations Limited may borrow on demand, with a total limit set at £500,000. The interest rate charged is the base rate plus 2 per cent.

The loan will be repayable on the third anniversary of the agreement, 6 April 2011. During the year, Ploughshare Innovations Limited borrowed £50,000 and the interest charged was £3,558.

The Trading Fund's holdings in its joint venture with Alaska Food Diagnostics Limited transferred to Ploughshare Innovations Limited during the reporting year ended 31 March 2006. Alaska Food Diagnostics Limited ceased trading during the current financial year. Ownership of the Trading Fund's holdings in its joint venture with Remo Technologies Limited transferred to Ploughshare Innovations Limited during the reporting year ended 31 March 2007. Ownership of the Trading Fund's holdings in its joint venture with P2i Limited transferred to Ploughshare Innovations Limited during the reporting year ended 31 March 2009. Ownership of the investments have remained with the subsidiary undertaking during the current financial year. The Trading Fund's holdings in its joint venture with Enigma Diagnostics Limited remain with the parent. Ploughshare Innovations Limited also has an investment in Enigma Diagnostics Limited.

**Joint ventures and associate**

There has been no related party trading during the current financial year, or previous financial years, with the joint ventures Esroe Limited, Subsea Asset Location Technologies Limited, ProKyma Limited and Sherwood Therapeutics Limited.

Alaska Food Diagnostics Limited ceased trading during the current financial year. Tetricus Limited is an associate. These entities are considered to be related parties. Details of the joint ventures and associate are provided in Note 12.

During the year, the following trading occurred with these entities, carried out under contract terms:

| | Sales | | | Purchases | | | Receivables | | | Payables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 |
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Alaska Food Diagnostics Limited | 0 | 20,564 | 5,622 | 0 | 0 | 0 | 4,808 | 5,242 | 0 | 0 | 0 | 0 |
| Claresys Limited | 0 | 0 | 0 | 80,000 | 20,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enigma Diagnostics Limited | 0 | 6,041 | 1,088 | 13,280 | 0 | 263,000 | 1,373 | 1,606 | 0 | 0 | 0 | 0 |
| P2i Limited | 0 | 0 | 0 | 0 | 919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Remo Technologies Limited | 0 | 0 | 0 | 37,387 | 0 | 87,727 | 0 | 0 | 0 | 0 | 24,047 | 0 |
| Tetricus Limited | 111,303 | 140,469 | 133,882 | 3,480 | 0 | 12,663 | 0 | 1,039 | 34,430 | 0 | 0 | 0 |

**Other public sector bodies**

Other public sector bodies are regarded as related parties by virtue of being under the same common control. During the year, the Group had various material transactions with certain public sector bodies. All transactions are carried out on contract terms and are subject to the normal course of internal and external audit.

| | Sales | | | Purchases | | | Receivables | | | Payables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 | 2010 | 2009 | 2008 |
| | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 | £'000 |
| British National Space Centre | 7.8 | 250.9 | 414.3 | – | – | – | – | 169.8 | 340.3 | – | – | – |
| Department for the Environment, Food and Rural Affairs | 89.4 | 52.6 | – | 31.6 | – | – | – | – | – | 9.6 | – | – |
| Department for Business, Innovation and Skills | 160.9 | 388.8 | 736.3 | – | – | – | – | 261.6 | 98.6 | 298.5 | – | 36.7 |
| Department of Health | – | – | 300.4 | – | – | – | – | – | 109.3 | – | – | – |
| Department for Transport | 4,021.1 | 3,565.6 | 2,308.2 | – | – | – | 1,409.1 | 1,887.2 | – | 629.1 | – | – |
| Engineering and Physical Sciences Research Council | – | – | – | 172.4 | – | 2,499.3 | – | – | – | 172.4 | – | – |
| Food Standards Agency | 106.3 | 206.0 | 33.0 | – | – | – | 26.6 | 145.2 | 44.4 | – | 28.5 | – |
| Government Communications Bureau | 9,494.7 | 4,100.2 | 2,653.8 | 107.1 | 56.7 | 75.3 | 4,805.2 | 4,569.3 | 2,478.9 | 2,382.7 | 922.7 | 615.9 |
| Health Protection Agency | 1,150.7 | 1,040.6 | 541.0 | 233.4 | 251.3 | 217.3 | 96.2 | 205.9 | 41.4 | 47.6 | 88.9 | 73.1 |
| Home Office | 15,119.0 | 12,047.9 | 12,762.8 | 35.1 | 16.9 | 48.4 | 3,226.0 | 4,830.7 | 5,359.4 | 1,653.8 | 796.4 | 1,507.8 |
| HM Revenue and Customs: Employer's and Employee's Income Tax and National Insurance | – | – | – | 44,160.9 | 41,756.8 | 39,495.9 | – | – | – | 5,602.6 | 6,120.0 | 5,333.8 |
| VAT | – | – | – | 24,655.8 | 29,033.4 | 19,049.2 | – | – | – | 9,426.1 | 3,461.0 | 4,353.8 |
| Cabinet Office – PCSPS | – | – | – | 27,106.7 | 26,525.9 | 24,858.3 | – | – | – | 3,282.8 | 3,491.8 | 3,302.8 |

No Minister, Board member, key manager or other related parties has undertaken any material transactions with the Group during the year. Any compensation paid to senior management is disclosed in the Remuneration Report.

## 30 Post-statement of financial position events

No events have occurred subsequent to the financial year end that require disclosure in these financial statements.

## 31 Operating segments

Group and Trading Fund

All of the Group's business reporting segments are disclosed to enable users of these financial statements to evaluate the nature and financial effects of the Group's business activities. The Group's corporate support reporting segments have been aggregated. All operating segments derive their revenues from the provision of specialist and technical services. The Group derives more than 80 per cent of its revenues from MOD, and more than 90 per cent of its revenues from public sector bodies, including MOD. More detailed disclosures can be found in Note 29, Related-party transactions.
More than 95 per cent of revenue is derived from UK sources. The Board does not review the business on a geographical basis. A geographical analysis would not be necessary to aid users' understanding of these financial statements.

Operating segment analysis for 2010:

| | Revenue (internal & external) £ million | Depreciation £ million | Amortisation £ million | Finance income £ million | Finance expense £ million | Retained profit/(loss) for the year £ million | Capital expenditure £ million | Total assets £ million | Total liabilities £ million |
|---|---|---|---|---|---|---|---|---|---|
| Air and Weapons Systems | 43.9 | – | – | – | – | 3.7 | – | 9.7 | 4.0 |
| Biomedical Sciences | 44.0 | 0.1 | – | – | – | 3.5 | 0.3 | 8.0 | 6.3 |
| Detection | 41.5 | 0.1 | – | – | – | 5.1 | – | 13.3 | 6.0 |
| Environmental Sciences | 19.8 | 0.4 | – | – | – | (0.4) | – | 2.9 | 0.8 |
| Information Management | 22.7 | 0.1 | – | – | – | 1.5 | – | 3.0 | 0.7 |
| Joint Systems | 11.3 | – | – | – | – | 0.8 | – | 2.6 | 1.2 |
| Land Battlespace Systems | 32.5 | – | – | – | – | 2.8 | – | 5.2 | 1.4 |
| Naval Systems | 32.2 | 0.1 | – | – | – | 1.9 | 0.8 | 6.9 | 2.5 |
| Physical Sciences | 37.1 | 0.1 | – | – | – | 3.5 | 0.4 | 11.6 | 5.0 |
| Policy and Capability Studies | 31.0 | – | – | – | – | 3.3 | – | 5.1 | 1.9 |
| Security Sciences | 88.8 | 0.5 | – | – | – | 8.3 | 0.3 | 33.2 | 15.8 |
| Sensors and Countermeasures | 36.7 | 0.2 | – | – | – | 3.5 | 0.5 | 7.7 | 3.5 |
| Counter Terrorism S&T Centre | 23.0 | – | – | – | – | 1.0 | – | 13.8 | 9.2 |
| Corporate | 47.1 | 10.5 | 1.2 | 0.1 | 1.2 | (22.0) | 28.5 | 261.9 | 93.5 |
| Ploughshare Innovations Limited | 1.1 | – | – | – | – | (0.7) | – | 2.3 | 3.7 |
| Internal trading group consolidation adjustments | (77.4) | – | – | – | – | – | – | (3.4) | (3.4) |
| **Total as per financial statements** | **435.3** | **12.1** | **1.2** | **0.1** | **1.2** | **15.8** | **30.8** | **383.8** | **152.1** |

Operating segment analysis for 2009:

| | Revenue (internal & external) £ million | Depreciation £ million | Amortisation £ million | Finance income £ million | Finance expense £ million | Retained profit/(loss) for the year £ million | Capital expenditure £ million | Total assets £ million | Total liabilities £ million |
|---|---|---|---|---|---|---|---|---|---|
| Air and Weapons Systems | 45.9 | – | – | – | – | 5.1 | – | 14.6 | 4.7 |
| Biomedical Sciences | 44.5 | 0.1 | – | – | – | 1.6 | 0.1 | 11.7 | 7.4 |
| Detection | 39.1 | 0.3 | – | – | – | 3.4 | – | 15.3 | 6.8 |
| Environmental Sciences | 19.3 | 0.4 | – | – | – | (1.4) | 0.1 | 3.6 | 1.2 |
| Information Management | 24.0 | 0.1 | – | – | – | 1.4 | 0.2 | 5.5 | 1.0 |
| Joint Systems | 9.2 | – | – | – | – | 0.5 | – | 1.7 | 0.9 |
| Land Battlespace Systems | 29.0 | – | – | – | – | 1.8 | 0.1 | 4.4 | 1.3 |
| Naval Systems | 34.4 | – | – | – | – | 1.9 | 0.1 | 7.1 | 3.0 |
| Physical Sciences | 33.9 | 0.1 | – | – | – | 1.2 | 0.1 | 9.5 | 4.6 |
| Policy and Capability Studies | 29.1 | – | – | – | – | 2.4 | – | 4.5 | 1.8 |
| Security Sciences | 72.8 | 0.5 | – | – | – | 3.3 | 0.3 | 32.3 | 14.3 |
| Sensors and Countermeasures | 32.7 | 0.3 | – | – | – | 0.3 | – | 8.6 | 3.0 |
| Counter Terrorism S&T Centre | 13.0 | – | – | – | – | 0.7 | – | 9.6 | 6.1 |
| Corporate | 52.7 | 6.6 | 0.7 | 1.8 | 0.9 | (52.4) | 45.1 | 245.4 | 95.5 |
| Ploughshare Innovations Limited | 1.1 | – | – | – | – | (0.7) | – | 2.1 | 2.7 |
| Internal trading group consolidation adjustments | (75.5) | – | – | – | – | – | – | (2.7) | (2.6) |
| **Total as per financial statements** | **405.2** | **8.4** | **0.7** | **1.8** | **0.9** | **(30.9)** | **46.1** | **373.2** | **151.7** |

Operating segment analysis for 2008:

| | Revenue (internal & external) £ million | Depreciation £ million | Amortisation £ million | Finance income £ million | Finance expense £ million | Retained profit/(loss) for the year £ million | Capital expenditure £ million | Total assets £ million | Total liabilities £ million |
|---|---|---|---|---|---|---|---|---|---|
| Air and Weapons Systems | 43.8 | – | – | – | – | 3.7 | – | 15.8 | 6.5 |
| Biomedical Sciences | 49.2 | 0.2 | – | – | – | 3.5 | 0.1 | 12.4 | 6.5 |
| Detection | 40.9 | 0.5 | – | – | – | 3.0 | – | 15.4 | 6.0 |
| Environmental Sciences | 17.1 | 0.4 | – | – | – | (1.7) | 0.2 | 4.4 | 0.7 |
| Information Management | 21.7 | – | – | – | – | 0.9 | – | 5.0 | 1.4 |
| Joint Systems | 4.4 | – | – | – | – | (0.1) | – | 0.9 | 0.1 |
| Land Battlespace Systems | 24.0 | – | – | – | – | 0.8 | – | 5.7 | 1.5 |
| Naval Systems | 34.5 | – | – | – | – | 1.9 | – | 9.3 | 4.0 |
| Physical Sciences | 29.6 | 0.1 | – | – | – | 1.2 | 0.2 | 9.5 | 4.3 |
| Policy and Capability Studies | 26.8 | – | – | – | – | 2.0 | – | 6.1 | 2.6 |
| Security Sciences | 67.6 | 0.7 | – | – | – | 3.2 | 0.5 | 29.1 | 9.7 |
| Sensors and Countermeasures | 31.9 | 0.3 | – | – | – | 2.3 | – | 9.5 | 2.5 |
| Counter Terrorism S&T Centre | 5.2 | – | – | – | – | 0.5 | – | 2.4 | 1.3 |
| Corporate | 50.1 | 7.0 | 0.8 | 4.6 | – | (5.4) | 37.6 | 245.6 | 65.2 |
| Ploughshare Innovations Limited | 1.2 | – | – | – | – | (0.7) | – | 2.8 | 2.0 |
| Internal trading group consolidation adjustments | (68.1) | – | – | – | – | – | – | (2.0) | (1.6) |
| **Total as per financial statements** | **379.9** | **9.2** | **0.8** | **4.6** | **–** | **15.1** | **38.6** | **371.9** | **112.7** |

More detailed information about the services provided by the business operating segments are as follows:

**Air and Weapons Systems** Provides analysis of systems on platforms and weapons systems that use the aerial battlespace.

**Biomedical Sciences** Provides MOD with the science base for the development of effective countermeasures for personnel against chemical and biological agents, blast and ballistics.

**Detection** Conducts research and provides advice on the detection and decontamination of chemical and biological agents and explosives.

**Environmental Sciences** Manages, monitors and controls environmental, radiological and chemical weapons demilitarisation hazards.

**Information Management** Provides high-quality and timely technical support, analysis, consultancy and research.

**Joint Systems** Provides systems advice in support of MOD decision making on complex issues that cross environmental boundaries.

**Land Battlespace Systems** Provides analysis and advice on land systems, including vehicles, weapons and battlefield command and control systems.

**Naval Systems** Provides analysis and advice on all maritime systems.

**Physical Sciences** Provides protection science, dispersion physics, material science and armour physics expertise.

**Policy and Capability Studies** Undertakes high-level operational analysis to support MOD and Government.

**Security Sciences** Provides focus for counterterrorism and support to front-line operations.

**Sensors and Countermeasures** Researches and develops sensor and countermeasure technology for MOD by pushing the boundaries of science to protect lives at sea, on land and in the air.

**Counter Terrorism Science & Technology Centre** Operates within Dstl on behalf of MOD. It was set up to co-ordinate MOD's science and technology research initiatives in response to terrorist threats. The centre provides a unifying hub to ensure that Government laboratories, industry and academia are efficiently used to provide an integrated Government response to terrorism.

**Corporate** Main functions and activities include:
– corporate governance and centralised functions such as finance and treasury management, human resources management, and commercial contracting management
– estate management
– business information systems
– knowledge services, providing access to Dstl's internal knowledge base, MOD-funded reports and the wider scientific and technical literature, together with a range of information and analysis services.

**Ploughshare Innovations Limited** It is Government policy to transfer technical knowledge, wherever possible, to the economy for exploitation of its full commercial and social potential. Ploughshare Innovations Limited is a wholly owned subsidiary, incorporated on 6 April 2005 as a vehicle for the transfer and management of the Trading Fund's Intellectual Property and joint venture initiatives.

## 32 First-time adoption of IFRS

Group

i. **Equity**

| | 1 April 2008 | | 31 March 2009 | | 31 March 2010 | |
|---|---|---|---|---|---|---|
| | Retained earnings £ million | Revaluation surplus £ million | Retained earnings £ million | Revaluation surplus £ million | Retained earnings £ million | Revaluation surplus £ million |
| Taxpayers' equity under UK GAAP* | 168.0 | 47.2 | 138.4 | 39.2 | 153.5 | 31.3 |
| Adjustments for: | | | | | | |
| Holiday pay accrual | (7.0) | | (7.0) | | (5.7) | |
| Intangible assets – software licences** | 0.6 | | 0.5 | | 0.8 | 0.1 |
| **Taxpayers' equity under IFRS** | **161.6** | **47.2** | **131.9** | **39.2** | **148.6** | **31.4** |

ii. **Retained profit/(loss) for the year**

| | £ million | £ million | £ million |
|---|---|---|---|
| Under UK GAAP | 15.3 | (30.8) | 14.6 |
| Adjustments for: | | | |
| Holiday pay accrual | (0.2) | – | 1.4 |
| Intangible assets – software licences | – | (0.1) | (0.2) |
| **Retained profit/(loss) for the year under IFRS** | **15.1** | **(30.9)** | **15.8** |

iii. **Cash flow**

There were no differences in cash and cash equivalents in the cash flow reported under UK GAAP and the cash flow reported under IFRS.

Software intangible assets have been brought onto the Statement of Financial Position in accordance with IAS38. Capitalisation has been retrospective for assets with a cost of more than £10,000 and a useful economic life of more than one year.

Accruals for holiday pay have also been brought onto the Statement of Financial Position in accordance with IAS19.

Retrospective adjustments have been made to prior periods.

Trading Fund

i. **Equity**

| | 1 April 2008 | | 31 March 2009 | | 31 March 2010 | |
|---|---|---|---|---|---|---|
| | Retained earnings £ million | Revaluation surplus £ million | Retained earnings £ million | Revaluation surplus £ million | Retained earnings £ million | Revaluation surplus £ million |
| Taxpayers' equity under UK GAAP | 169.1 | 45.6 | 140.2 | 38.1 | 156.0 | 30.2 |
| Adjustments for: | | | | | | |
| Holiday pay accrual | (7.0) | | (7.0) | | (5.7) | |
| Intangible assets – software licences | 0.6 | | 0.5 | | 0.8 | 0.1 |
| **Taxpayers' equity under IFRS** | **162.7** | **45.6** | **133.7** | **38.1** | **151.1** | **30.3** |

ii. **Retained profit/(loss) for the year as at 31 March 2008**

| | £ million | £ million | £ million |
|---|---|---|---|
| Under UK GAAP | 15.9 | (30.1) | 15.3 |
| Adjustments for: | | | |
| Holiday pay accrual | (0.2) | – | 1.4 |
| Intangible assets – software licences | – | (0.1) | (0.2) |
| **Retained profit/(loss) for the year under IFRS** | **15.7** | **(30.2)** | **16.5** |

iii. **Cash flow**

There were no differences in cash and cash equivalents in the cash flow reported under UK GAAP and the cash flow reported under IFRS.

Software intangible assets have been brought onto the Statement of Financial Position in accordance with IAS38. Capitalisation has been retrospective for assets with a cost of more than £10,000 and a useful economic life of more than one year.

Accruals for holiday pay have also been brought onto the Statement of Financial Position in accordance with IAS19.

Retrospective adjustments have been made to prior periods.

*Generally Accepted Accounting Principles

**The first-time adoption of IFRS has been used as a convenient start point for capitalising software licences. It is not a direct consequence of the adoption.

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