The Defence Science
and Technology Laboratory

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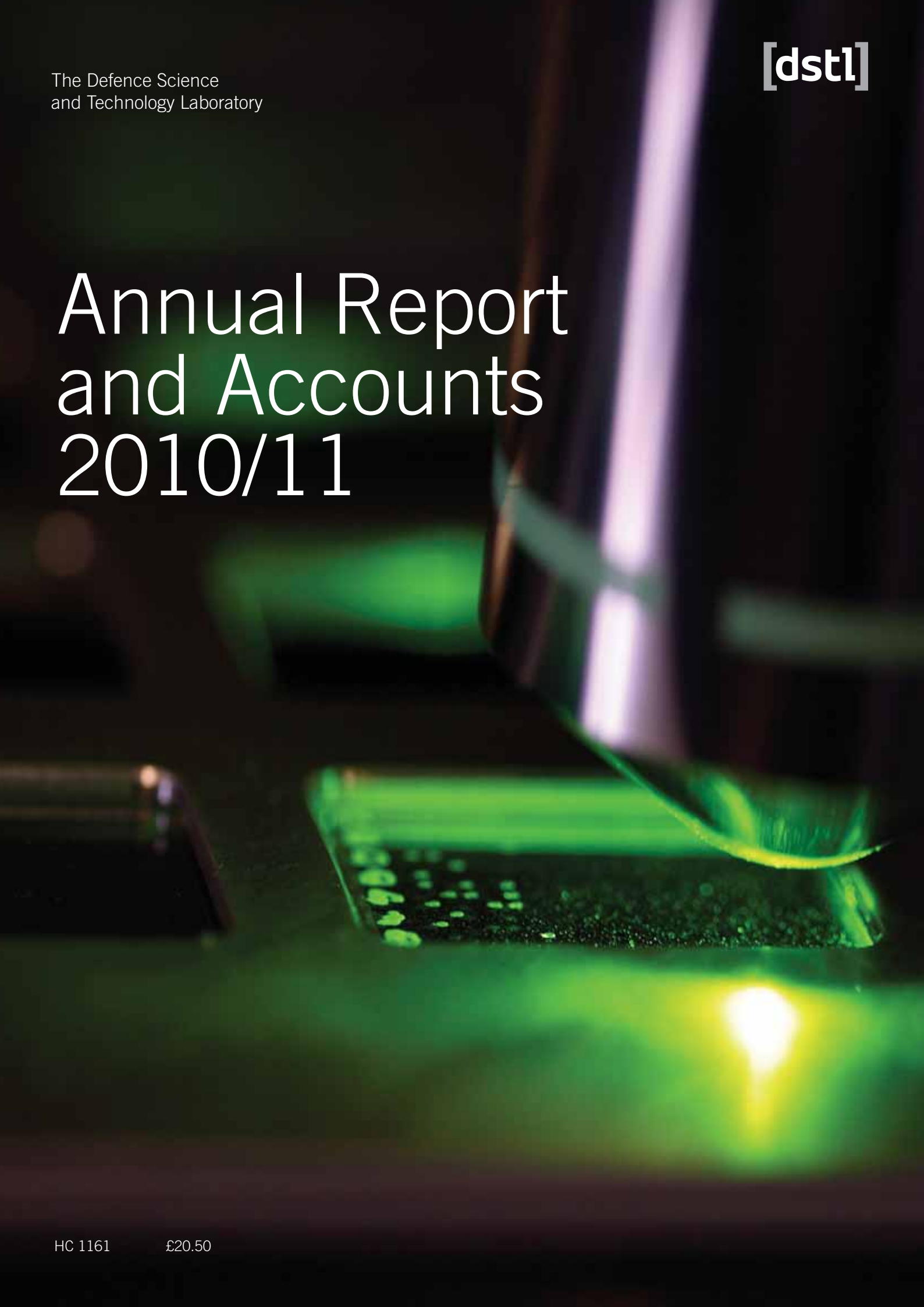
Annual Report and Accounts 2010/11



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Defence Science and Technology Laboratory

Annual Report and Accounts 2010/11

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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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Overview

About Dstl

Dstl's Purpose is to maximise the impact of Science and Technology (S&T) for the defence and security of the UK – providing the professional in-house expertise and leading the defence and security S&T community to develop and employ the capabilities that are needed to deliver the National Security Strategy and the Strategic Defence and Security Review. In the Dstl context, S&T covers all aspects of science and technology and their applications, including social science, mathematics and engineering.

As the Government's in-house defence S&T organisation, we work with industry, academia and our international partners to deploy and deliver advances in military capability, support government decision making and insure against current and future threats and risks.

We also work with Other Government Departments (OGDs), exploiting our expertise and knowledge to improve the safety and security of UK citizens, and with international partners to support wider diplomatic aims.

Our role

Following changes to the political and economic context over the past year, MOD has undertaken a review of how Dstl can best contribute to defence and security from our position within government. As a result, Dstl has an updated role with increased emphasis on leading, co-ordinating and managing work delivered by others and building ever stronger relationships with industry and the international community to be successful.

Dstl's updated role comprises six elements:

- supplying sensitive and specialist S&T services for MOD and wider government
- providing and facilitating expert advice, analysis and assurance to aid decision making and to support MOD and wider government to be an intelligent customer
- leading the formulation, design and delivery of a coherent and integrated MOD S&T programme using industrial, academic and government resources
- managing and exploiting knowledge across the wider defence and security community, and understanding S&T risks and opportunities through horizon scanning
- acting as a trusted interface between MOD, wider government, the private sector, academia and allies to support military co-operation, capability delivery, diplomacy and economic policy
- championing and developing S&T skills across MOD, including managing the careers of MOD scientists.

Chairman's statement

This was a challenging year for Dstl. Key immediate priorities included sustaining support for the Armed Forces in Afghanistan and for counterterrorism policy development and operations. The Government published its National Security Strategy and Strategic Defence and Security Review to which Dstl staff made important contributions and which provide the basis for much further work. This includes ensuring that Dstl's forward programmes reflect agreed priorities. There was a continuing focus on improving value for money in defence where Dstl continues to play a major role in working with others across MOD.

At the same time, Dstl has taken on the responsibility for leading the defence non-nuclear research programme, working closely with industry and academia with which some 60 per cent of the total programme is placed. Putting these new arrangements successfully in place on the basis of mutual trust with industry has been a main priority for the Board and I congratulate those involved in Dstl for the progress that has been made.

This year there has also been considerable uncertainty for staff over future income and over Dstl's organisational position while the periodic review of Trading Fund status has been carried out. I am grateful for the way in which staff have not let inevitable uncertainty impact adversely on performance.

The Board is very pleased that the Government has agreed Dstl's future role, which is described on page 4 of this report, and that Dstl should continue as a Trading Fund. We believe the Trading Fund model offers transparency for our customers and incentivises Dstl to continue to improve its performance, as this year's results show.

The keys to Dstl's success are the quality and commitment of our people. The results of the Civil Service People Survey at Dstl were generally encouraging, as is our reputation as a graduate employer. We need to maintain these strengths as we continue to reduce the number of permanent civil service employees and to shift the balance between permanent and non-permanent staff to give us more agility in coping with changes in income. In 2010/11, the number of permanent staff fell despite taking on the new task of managing the research programme.

This report includes, for the first time, income of £116.4 million for the external programme now managed by Dstl but wholly delivered by others. On a like-for-like basis excluding this income, net income for the year was marginally higher in cash terms than for 2009/10. Charge-out rates to customers were held in cash terms at the same level as in 2009/10, and therefore fell in real terms. Due to the very tight control of costs, operating profit for the year was £41.3 million. This is enabling Dstl to continue to self fund facilities of the necessary quality to support the forward programme.

I would like to thank the staff and our Chief Executive Frances Saunders for all that they have achieved in a demanding but very successful year for Dstl.

Sir Richard Mottram
Chairman
16 June 2011

Chief Executive's statement

This has been another very busy, productive and successful year for the organisation on all fronts. Operationally, we have led the delivery of an increased volume of work while continuing to reduce our costs, manage a reduction in our permanent headcount and bring in external expertise to augment capacity.

The rapid formation of the Defence Science and Technology (DST) Programme Office within Dstl, and its initial focus on letting the externally led S&T programme for MOD, was a massive challenge. Some parts of the supply base voiced concerns that this new arrangement, while achieving significant cost savings for MOD, would have a negative impact on their engagement with MOD end users and with the programme. As Chief Executive and Accounting Officer for all the money that passes through the Trading Fund, not only that delivered with internal resources, I take very seriously my responsibilities for ensuring that the Programme Office commissions work from the best suppliers for the task required and always seeks value for money from use of public funds.

We are continuing to re-position Dstl, and its capabilities, so that they are well placed and have the skills to lead and facilitate S&T work rather than planning to do it all ourselves. However, there are some sensitive, or strategically vital, work areas where it remains the case that civil servants must play a full part themselves. This direction has been recognised strategically in this year's Trading Fund Review, through which we have agreed both a refresh of our role as an agency of MOD and Government and the reaffirmation of the continuing value of Dstl as a Trading Fund.

We have taken on greater responsibilities for developing and delivering benefits from international relationships, and are embracing the opportunities our refreshed role has given us for following up the strategic intent with programme actions. We have also been enhancing our strategic engagements with the defence and security S&T base in the UK, exploring how to assess the effectiveness of these relationships. The Programme Office has been building further on the existing range of collaborative ways of working with suppliers and following up on the initial success of the Centre for Defence Enterprise to reach out into the non-traditional supply base, to involve them in innovation and in solving some of the most challenging problems we have.

As highlighted in some of the case studies in this report, Dstl is at its best when it has to deliver to demanding timescales. Our work in support of operations in Afghanistan has continued at a pace with increased numbers of staff deploying as analysts or scientific advisers as well as in forward deployed laboratories and in support of trials of equipment upgrades in the harsh environment in which they will need to operate. We have again contributed to a large number of Urgent Operational Requirements (UORs) and take pride in knowing that, through these, S&T is helping to save lives and pursue the very difficult campaign objectives.

Our analytical community has also been very active, whether in supporting the Strategic Defence and Security Review or using our novel peace operations wargaming techniques in operational planning in Afghanistan. As challenges mount and resources become ever more constrained, the effective use of analysis to support senior decision makers to visualise their options and exercise their plans is another example of where the S&T community can have a significant impact.

Dstl's staff are, as always, the critical ingredient that has made all of this happen. As our good results in the Civil Service People Survey showed us this year, our staff take great pride in their work and are highly committed to what they do and to Dstl. I am immensely proud of them, their professionalism and the way they respond to the challenges that face us. My thanks to all who have helped Dstl to make an impact on the defence and security of the UK this year.

Frances Saunders
Chief Executive
16 June 2011

Business review

Performance against Key Targets 2010/11

During 2010/11, Dstl had five Key Targets against which its performance was judged. Most of the targets were met in full.

Key Target 1 – Achieved

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.

Dstl continues to benchmark its performance by monitoring a wide range of programme activity that supports operations, military capabilities and MOD policy. Feedback from customers has confirmed that Dstl's outputs continue to be high quality and address their priority issues.

Key Target 2 – Achieved

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.

Dstl has delivered 95 per cent of its projects to time and 92 per cent of its projects to budget. Improvements in data collection methods have increased the amount of customer information used to monitor Dstl's performance. A total of 94 per cent of responses delivered scores of 7 out of 10 or above for overall satisfaction.

Key Target 3 – Achieved

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'.

Of the 10 groups that were independently assessed by external subject matter experts drawn from industry, academia, wider government and internationally, none were judged to fall into the category 'development needed'. All 10 groups were found to be fit for purpose, with only one of these groups assessed to be 'at risk'.

Highlights

Dstl delivered
95 per cent
of its projects to time and
92 per cent
to budget

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Key Target 4 – Achieved

Maintain strong business performance through:

- achieving an average Return on Capital Employed (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.

Dstl has achieved a ROCE of 14.6 per cent for 2010/11, with a projected average of 7.0 per cent over the period 2009 to 2014. This is complemented by an operating profit of £41.3 million, achieved while reducing charge-out rates in real terms. Non-staff cash costs have been controlled to 27.8 per cent of net income.

Key Target 5 – Partially achieved

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
- increasing energy efficiency per m^2 by 17 per cent relative to 2001/02 levels
- increasing recycling figures to 80 per cent of waste arisings.

Dstl is committed to reducing the environmental impact of its activities. Taking into account Dstl's consolidation of its activities from 16 predominantly leased sites on to three core sites, the carbon emissions target has been met operationally. However, Dstl is currently reporting an increase in carbon emissions of 7.5 per cent as the reporting framework precludes Dstl from including its leasehold site emissions in the baseline data. When expressed on a per head basis, Dstl has achieved a 20.5 per cent reduction in carbon emissions, relative to 2001/02 levels. Dstl has increased energy efficiency by 23.3 per cent per m^2 relative to 2001/02 levels – this is largely due to the site rationalisation programme, higher density occupation of open-plan areas and investments in energy controls and monitoring.

Dstl is recycling or re-using 92 per cent of waste arisings – significantly exceeding both MOD and government targets.

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Customers and markets

From the military commander in the field through to policy makers within government, Dstl works for a wide range of customers within the UK Armed Forces, MOD and Other Government Departments (OGDs). We draw on our own internal capabilities and the wider S&T supply base to maximise the impact of S&T for the defence and security of the UK.

The past year has seen a profound change in Dstl's remit. Dstl now leads and manages MOD's non-nuclear defence research programme on behalf of the R&D Board, chaired by the Chief Scientific Adviser (CSA). This involves commissioning work using both internal and external resources. Income from the new External Programme that Dstl now co-ordinates on behalf of MOD was £116 million. Defence research continues to focus on key areas, including the Counter-Improvised Explosive Device (C-IED) programme, armour protection and combat casualty care – which aims to enhance battlefield treatment strategies.

At the heart of Dstl's current programme of work is our support to operations in Afghanistan. This year, we have increased our deployment of scientists, analysts and trial teams and we now have 19 established staff posts in Afghanistan and one in Bahrain. In total, we have directly supported more than 50 Urgent Operational Requirements (UORs).

Supporting visits, trials and operational concept demonstrators in Afghanistan is a key activity. As an example, Dstl deployed 16 analysts with a world-leading war game capability to Kabul to help the International Security Assistance Force (ISAF) Joint Command assess and refine the Afghanistan campaign plan.

This activity involved the NATO Regional Commands, Afghan security forces and civilian agencies, and focused on the transition of key provinces to Afghan Government control.

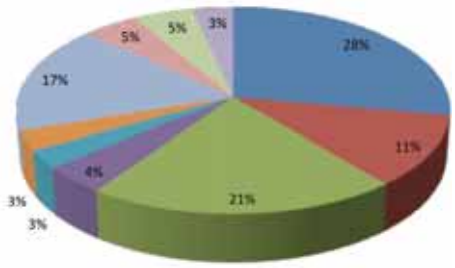
Dstl researchers also deployed to Kandahar to participate in a highly successful multinational C-IED effort that US Commander General Petraeus described as 'extraordinary'.

We continue to work closely with colleagues in MOD's Defence Equipment and Support (DE&S) organisation. Our income from this work stream was £95 million (2009/10: £100 million). This year, we have worked with DE&S to improve the application of technical expertise within new equipment projects and to support the armed forces in getting the most from their equipment. We have helped to pioneer generic vehicle architecture – a way of managing vehicle design that could generate cost savings of 20 to 25 per cent over the life of a vehicle platform.

profile: Saving lives on the battlefield

Optimising treatment strategies for battlefield casualties plays a critical role in saving lives in theatre.
MOD's Combat Casualty Care (CCC) programme, which is a focus for work in this area, has seen significant advances over the past 12 months with key support from Dstl.
The CCC programme is specifically focused on the medical management of battlefield casualties from fragments, bullets, blast and burns as well as the characterisation of injury mechanisms and vulnerability/survival studies. The aim is to reduce mortality, ensure that military personnel receive equivalent levels of care to the NHS, and sustain the fighting force of troops in the aftermath of battlefield injury.
Building on the results of novel resuscitation studies, a new phase of research on haemostatic resuscitation has commenced this year. This work seeks to assess whether pre-hospital administration of blood products will improve clotting status during the early in-hospital phase when disturbances in the blood clotting processes can limit treatment options.
This year has also seen the launch of the new National Institute for Health Research (NIHR) Centre for Surgical Reconstruction and Microbiology at University Hospitals Birmingham NHS Foundation Trust and the University of Birmingham.
The new NIHR Centre is a partnership between the Department of Health and MOD. Building on a unique and longstanding relationship between the two departments, the centre aims to advance knowledge and treatment options for severely wounded patients (both civilian and military) and provide a national focus in surgical reconstruction and microbiology. The centre will improve the co-ordination and cross-fertilisation of research and innovation and encourage more collaborative research.

Income by market 2010/11



- CSA: internally delivered programme
- CSA: internally led, externally delivered programme
- CSA: external programme
- Other MOD research
- Policy and other MOD
- Front line commands
- Equipment and support
- Defence intelligence
- OGDs
- Non-Exchequer

Figures based on funding source

Note:
Total turnover was £564 million. The CSA non-nuclear research programme managed by the DST Programme Office includes an additional £57 million contracted directly to industry and academia by DE&S. This does not pass through Dstl and is not therefore included in this income analysis.

Dstl analysts have provided support to the Strategic Defence and Security Review (SDSR). Dstl helped Ministers to understand the impact of different policy options and force structures on defence costs.

Dstl staff are now developing a full range of scenarios and analysis techniques to represent revised UK policy, and to support implementation.

Our support to Defence Intelligence has achieved notable success and income from this area was £26 million (2009/10: £28 million). As an example, Dstl's operational support capability at Fort Halstead has delivered significant impact and supported operations at home and abroad.

A total of 91 per cent of our work is carried out on behalf of MOD. However, we also work with OGDs to help meet their security objectives, with an emphasis on counterterrorism, transport and aviation security. Income from OGDs was £28 million (2009/10: £30 million).

Finally, international collaboration continues to play an important role in our work, helping to share the cost of mutually beneficial research. As an example, Dstl has recently teamed up with French Government counterparts and MBDA (Missile Systems) to develop new families of complex weapons to provide enhanced capability for our forces. This builds on longstanding activities between the two nations.

profile: Science support on the front line

In 2010, Dstl engineer Becky Simpson spent four months working as a scientific adviser on the front line in Afghanistan. Becky is one of a growing number of Dstl staff who undertake short-term operational deployments to provide S&T advice to operational commanders.

"I was keen to see first hand the challenges that our armed forces are facing and make a real difference on the front line," explains Becky, who has worked for Dstl since 2006.

During her deployment, Becky was stationed at Lashkar Gah – the HQ for Task Force Helmand.

"My role was to provide specific advice on a wide range of subjects – from human factors through to improvised explosive devices," she says.

"So, I had to respond quickly on life-critical issues."

Becky had access to 24/7 advice and 'reach back' to Dstl colleagues in the UK. "It's great to know that you have this support but ultimately you're the main point of contact and you feel a great sense of personal responsibility," explains Becky.

Becky also supported operational trials to test prototype equipment and she provided regular reports on emerging operational issues for colleagues in the UK.

"During your deployment, you work long and arduous hours," she says. "You learn to pace yourself over the four months of long working days – with 7-day weeks. However, everyone is in the same boat and there is a real sense of camaraderie amongst the military and civilian staff in the HQ."

Becky's technical background is in armour protection, which meant that she was often in demand for post-incident vehicle armour inspections and advice on mitigation measures as threats evolved.

"I was in the privileged position of working with operational HQ commanders who are making critical decisions and I saw the vital role that S&T plays in helping to create the winning edge.

"I have gained invaluable knowledge and understanding through my deployment," she concludes. "Having coped with all the pressures and demands in theatre, I feel that I am well prepared to take on any challenge."

Operations review

Dstl provides specialist S&T services in core capability areas and also works in collaboration with the wider S&T supply base on a variety of activities.

Dstl's work spans a very wide range of defence and security issues. Highlights this year have included supporting the SDSR, investigating future concepts for our forces in 2020 and beyond, working in defence and across government to support current operations and ensuring that S&T is effectively exploited to address current needs and opportunities. Dstl's work also ensures that the research programme provides the essential technology and understanding to meet tomorrow's challenge.

A small selection of examples in these areas is set out in this section.

Specialist support to the front line

- delivered critical S&T to counter IEDs in Afghanistan, drawing heavily on industry expertise to transition solutions to theatre in the areas of novel detect technologies, multi-source intelligence collection, fusion and visualisation, and virtual reality training
- launched and trialled a novel Information Superiority experimentation capability. This will help to develop new methods of information management, leading to improved intelligence to counter IEDs
- provided advice to support operations in Libya
- deployed Dstl scientists to implement advanced techniques to derive intelligence on insurgent networks. The output from this work has saved lives
- developed advanced sensor processing algorithms for priority operational needs (such as exploiting radar imagery to enable the detection of covert activity in mountainous terrain – see page 33).

Support to counterterrorism

- provided significant expert witness testimony at the 7/7 London Bombings Inquest and deployed scientists from Dstl's Forensic Explosives Laboratory to high-profile UK and international incidents
- opened the Home Made Explosives Facility to improve counterterrorism responsiveness to new and challenging improvised explosive threats
- developed an integrated dispersion model that can predict airflow and the movement of hazardous materials in complex urban environments. This world-leading capability is being used to inform the National Risk Assessment.

Support to decision making

- developed new analysis techniques to determine the key contributors to whole life costs for the UK Combat Air fleet. This will significantly improve MOD's ability to forecast the cost and risks of future fleets of combat air platforms

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profile: Support to decision making

Dstl's scientists and engineers provided critical technical advice and analysis to MOD's recent Strategic Defence and Security Review (SDSR) – ensuring that Ministers' decisions were informed by evidence. This included the provision of specialist technical input on a wide array of subjects from synthetic training through to heavy lift aircraft. Dstl's input helped to identify potential changes and assess their risks and implications.

Dstl's defence policy analysts and in-house military staff ran a series of war games to help policy makers and tri-service planners identify the type and size of forces that could be required in the future. This work covered the full range of potential future operations – from evacuating civilians and stabilising a country through to a major international operation.
Dstl analysts also helped Ministers to assess the number and scale of operations that could be achieved by the Armed Forces, given different levels of funding in the future, by drawing together information from previous scenario planning exercises. This work was vital in enabling the National Security Council to set a requirement for the future force for 2020 that would meet their policy needs while remaining affordable.

- led the first UK air research trial using Typhoon aircraft and simulation facilities in tandem to investigate training interoperability. The outputs will support plans to increase the proportion of simulated training and help reduce defence costs
- conducted a sea trial to assess command and control and weapon effectiveness of Royal Navy ships against the close-in threat from small craft. Provided advice and recommendations for training improvements and modifications to equipment
- led a major pan-government and international project to identify the capabilities required to deal with the most serious terrorist threat defined in the recent National Security Strategy.

Supplying sensitive and specialist S&T services

- played a leading role in the licensing of medical countermeasures, including the UK ricin and botulinum anti-toxin programmes and the US plague and anthrax vaccine programmes
- developed the world's first stand-off spectroscopy system that can detect and characterise hazardous materials through containers – with potential applications in airport security screening
- undertook marine environmental radioactivity surveys, and reach back incident and training support to personnel, at Diego Garcia – a British overseas territory with an operational berth for visiting nuclear submarines
- contributed to the national cyber strategy and successfully completed practical cyber vulnerability assessments on key elements of the national infrastructure in a cross-government programme.

Future capability

Air

- played a leading role with industry in the development of the TARANIS unmanned combat air vehicle demonstrator – the first autonomous stealthy unmanned aircraft of its kind in the UK. This builds on longstanding support to MOD in assessing future concepts and technologies for 'unmanned' deep strike air systems
- conducted research into increasing the effectiveness and reducing

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profile: Pioneering protection

Dstl has led the scientific development of a pioneering pelvic protection system to help safeguard troops against life-changing injuries.

IEDs remain the most common cause of serious injuries to personnel on operations in Afghanistan, with the dismounted soldier on foot patrol being the most vulnerable.

Faced with this threat, Dstl helped MOD to identify the need for increased protection to the groin and pelvic region of these soldiers and a UOR was issued.

Dstl undertook the initial feasibility study and oversaw development and trials work to define the precise nature of the threat, the critical areas to protect, and suitable protective materials. The Dstl team advised on the procurement of a tiered pelvic protection system, which has been developed in conjunction with industry partners.

Tier 1 is a modified boxer short design, which is already being worn by troops on operations. Around 60,000 pairs have been issued to personnel in Afghanistan, and a further 60,000 are to be delivered this year.

The Dstl scientists faced a number of challenges during the design phase, which included understanding the balance between tolerable burden on the soldier and protection. Practical trials involved firing thousands of fragments at materials to rank their performance. The team also assessed how standard day-to-day tasks performed by soldiers were affected by the different design options.

The most efficient solution for the lightest weight protection was surprisingly found to be silk and this formed the basis for Tier 1 protection. The way that silk is woven makes it very strong, with a very high ballistic efficiency. Feedback from medical staff treating the injured confirms that it does make a noticeable difference to the severity of injuries sustained.

The second tier of protection is detachable pelvic armour that clips onto the soldier's standard uniform – which was delivered to troops in February 2011. Troops at even greater risk of blast injuries, such as IED disposal operatives, will also receive a third piece of equipment covering the upper leg and wider abdominal regions.

Dstl's work on this project has drawn on the combined expertise of scientists and engineers within Dstl's Biomedical Sciences, Information Management, Land Battlespace Systems and Physical Sciences Departments as well as a range of suppliers.

through-life costs for future missile systems in partnership with the French Government and UK/French industry and academia

- developed a fieldable solution in collaboration with industry to address the problem of helicopter 'brownout' – a challenging issue in Afghanistan.

Land

- supported industry on the Soldier Burden programme, including the development of a small unmanned robotic vehicle to accompany the infantry soldier and carry part of the load
- worked with a multi-disciplinary academic team to provide 24/7 solutions to power generation for the dismounted soldier
- supported MOD and industry on the General Service Respirator programme from initial concept through to in-service delivery in August 2010
- funded the high-risk elements of the next generation high-capacity UHF data radio in partnership with industry. This addresses current network limitations and has resulted in a five-fold increase in capacity
- supported the development of a miniaturised frontline oxygen system in conjunction with industry. This has the potential to deliver concentrated oxygen to casualties on the battlefield and dramatically increase survival rates.

Naval

- collaborated with industry on a new landing craft that can move faster and make beach landings considerably easier for the Royal Marines
- developed 'SubSafe' in conjunction with industry/academia. This is an interactive 3D tool that provides a virtual vessel for submariner recruit training and could help to reduce costs
- worked with industry on plasma antenna technology for submarines to enable smaller and more covert antennas that can be raised above the sea surface for communications.

Security

- established integrated emergency response arrangements with the Health Protection Agency to allow the processing of civilian human diagnostic samples in Dstl's high containment facilities
- developed a prototype integrated sampling and biological agent detection device for first responders and working cooperatively to exploit the device with industrial partners
- supported the development of novel liquid screening regimes in aviation security on behalf of the Department for Transport. This included tri-nation trials at Australian airports.

Image courtesy of the Motorsport Industry Association and AT&T Williams F1.

profile: Stimulating ideas

To maintain the winning edge on the battlefield, our armed forces must have access to the latest technology innovations. This means being able to draw on the huge technology investments in the civil sector as well as the defence sector to deliver cost-effective solutions.

The Centre for Defence Enterprise (CDE), which is run by Dstl, is the first point of contact for anyone with a new innovation that has a potential defence application. CDE is open to all organisations – whether new to the defence market or established suppliers. Around 60 per cent of CDE contracts are signed with small to medium-sized enterprises.

CDE provides opportunities to attract civil technologies into the defence market and to widen the supplier base. For suppliers, this approach provides a route into the defence market and visibility of MOD requirements and challenges.

Contracts awarded are typically £30,000 to £100,000 for short, sharp studies to assess potential and inform funding decisions. Successful projects are considered for further funding under MOD's research programme or the equipment programme.

CDE operates a standing open call for proposals and themed calls that address a specific requirement. To stimulate proposals, CDE hosts a wide range of events across the UK. In 2010/11, CDE undertook six general briefings, 11 themed call launch seminars and more than 100 one-to-one surgery appointments. Around 1600 delegates attended these events, which involved working across government departments, trade bodies and devolved authorities.

In the past 12 months, more than 1000 proposals have been received through the CDE portal and approximately 10 per cent have been selected for funding worth a total of £6 million. One such contract has involved engineering firm Cosworth, which secured CDE funding to transfer technology originally developed to monitor and assess Formula 1 motor sport crashes into armoured vehicles. This would enable instant and accurate assessment in the event of blast attack – providing information on any injuries inflicted as well as any hidden damage to the vehicles. The work was successfully completed and is now being considered for further development by DE&S.

Technology transfer

Dstl generates a wide variety of technologies and know-how as a result of its defence research. Exploiting the value of this research within the wider economy generates maximum value for defence and the UK as a whole.

Ploughshare Innovations Ltd was established in 2005 to exploit Dstl's Intellectual Property (IP) in non-defence markets. Through licensing, spin-out and joint venture deals, the company has led the commercialisation of a range of technologies from liquid repellent coatings through to acoustic reflectors.

Since its formation, Ploughshare has licensed 75 new technologies to industry and launched five new spin-out companies. Ploughshare's work with Dstl's Intellectual Property Group has also helped Dstl to make cost effective use of its IP portfolio.

2010 has been a year of change for Ploughshare with the introduction of a new organisational structure, redefinition of its core technology transfer processes and the injection of fresh skills and expertise to the team in terms of marketing and sales.

All of these factors have contributed to Ploughshare's best year yet with revenue exceeding all previous years and the company as a whole making a retained profit of £0.5 million.

Recent highlights have included work on a variety of projects such as the development of lateral flow devices and reactive dyes. This continued success will, over the coming months, allow Ploughshare to expand its funding for proof-of-concept research in Dstl and enable technologies to be further developed prior to commercialisation.

In addition to its work with Dstl, Ploughshare has collaborated with the Atomic Weapons Establishment and central MOD to exploit their portfolios of technologies. This has resulted in a number of successful licensing agreements in areas as diverse as water treatment and radiation detection.

To deliver continued success in the long term, Dstl must continue to highlight new technologies and identify future exploitation opportunities. During the past year, 49 new patents have been added to Dstl's portfolio. A total of 17 Dstl inventors and team members were awarded £76,000 under the Dstl-Ploughshare Rewards to Inventors scheme. This takes the sum paid to Dstl scientists and engineers in the past five years to more than £330,000.

profile: Reflecting success

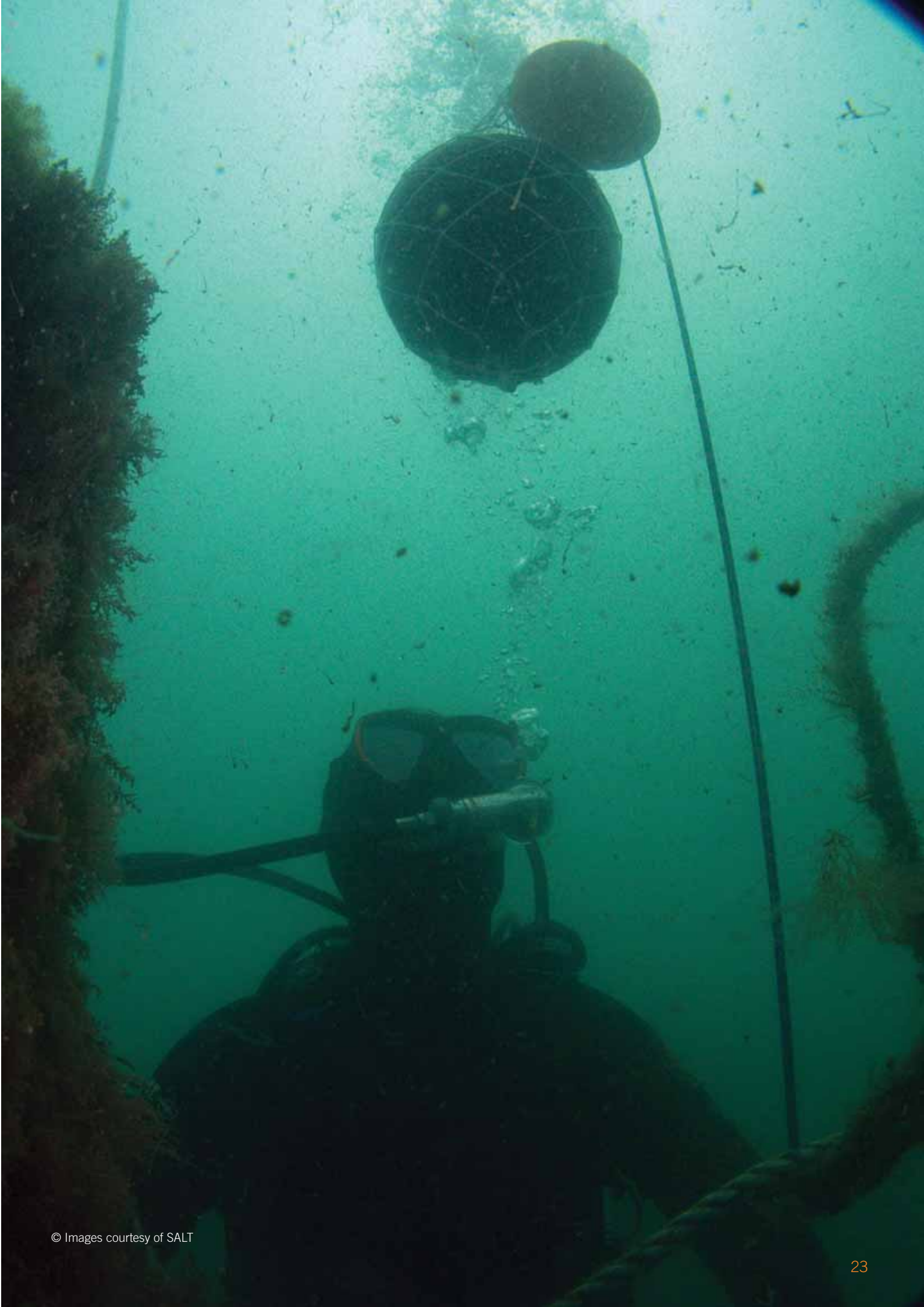
Working underwater, particularly at depth, is difficult and dangerous. Operations must be conducted quickly and accurately – especially in the event of a crisis – to ensure safety and to keep costs down. Accordingly, equipment and other assets used on the sea bed must be easy to locate.

In the past, simple but inefficient corner reflectors have been used to improve the visibility of equipment. Transponders attached to equipment have also been used to emit an underwater noise but these require power and have associated maintenance needs.

In response to military requirements, Dstl staff developed and patented an efficient passive reflector, drawing on their significant materials, acoustic, and modelling knowledge. This product is more efficient and reliable than a corner reflector without the power or maintenance requirements of a transponder. Being passive, the technology does not emit confusing signals to mammalian marine life.

The IP has been subsequently licensed to Sub-sea Asset Location Technologies Ltd (SALT) – a company set up by Ploughshare in 2008 to generate private investment in developing the technology for commercial and defence use.

In the past 12 months, SALT has completed commercialisation activities – creating a product that not only fulfils its technical potential but also makes its manufacture, shipping and deployment a viable proposition. Now selling in the commercial sector, the product is generating considerable interest across the world.



© Images courtesy of SALT

Financial review

Dstl achieved an operating profit for the year of £41.3 million (2009/10: £20.9 million), an increase of £20.4 million. This results from a three per cent increase in underlying sales combined with rigorous action to control costs.

Turnover

Underlying turnover for the year was £448 million (2009/10: £435 million), an increase of three per cent. Additionally, Dstl assumed responsibility for managing the whole of CSA's non-nuclear research programme from April 2010. Contracts previously let directly by MOD, primarily to private sector companies, are now funded through Dstl via the 'External Programme' – as set out in the table below.

£ million	2010/11	2009/10
MOD:		
Research	243	226
Non-research	155	160
	398	**386**
Non MOD:		
OGDs	28	30
Non-Exchequer	13	10
Estates	7	8
Intellectual Property	2	1
Underlying turnover	**448**	**435**
Turnover transferred from MOD from April 2010		
	2010/11	**2009/10**
External programme	116	–
Total turnover	**564**	**435**

The increase in underlying turnover follows Dstl's successful delivery of a number of high-impact programmes in direct support of current military operations – as commented on elsewhere in this report. The transfer of sales associated with the External Programme results in MOD now accounting for 91 per cent (2009/10: 89 per cent) of Dstl's turnover. Sales associated with the External Programme have had no impact on profit while enabling MOD to cut approximately 100 posts.

Cost of sales

£ million	2010/11	2009/10
External programme	116	–
Dstl	123	123
Total	**239**	**123**

Cost of sales has increased by £116 million to £239 million (2009/10: £123 million). This increase is entirely due to the External Programme and matches the value of the External Programme included within turnover.

Operating expenses

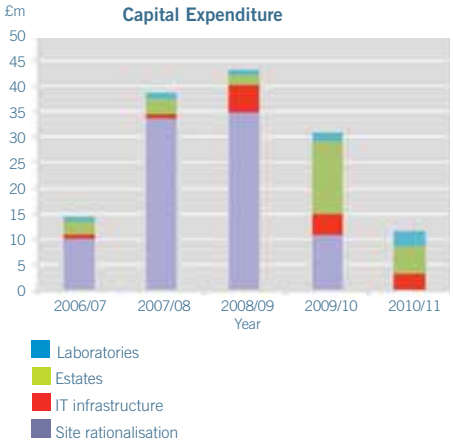
£ million	2010/11	2009/10
Staff costs	187	180
Non-staff costs	90	106
Depreciation and amortisation	13	13
Other operating income	(6)	(7)
Total	**284**	**292**

Operating expenses have reduced by £8 million to £284 million (2009/10: £292 million). This follows the introduction of a tighter cost control regime, and the commencement of an ongoing programme both to reduce costs and to increase efficiency. In addition, Dstl is changing the balance of its workforce towards greater use of non-permanent staff to increase the organisation's flexibility in meeting changes in future demand for its services.

Capital investment

Capital investment reduced to £11 million (2009/10: £31 million) following successful completion of Dstl's site rationalisation programme in 2009/10. Significant investments included completion of a £1.9 million

upgrade to the corporate business information system, commencement of a £2.6 million Home Made Explosives Facility and ongoing investment in a £10 million programme to refurbish effluent treatment plant for bio-containment facilities.



Funding and treasury management

Dstl has been funded by a loan from MOD of £32 million, which was fully drawn down in 2009/10. This followed payment of a £25 million special dividend to MOD in 2008/09. Repayment of the loan commenced in 2010/11 and will be repaid over 10 years. The average interest rate on the loan has been fixed at 3.9 per cent and the outstanding year-end balance was £29 million.
Dstl ended the year with cash of £72 million (2009/10: £40 million). The increase in cash reflects Dstl's strong trading performance. Dstl's ongoing investment programme will be funded from internally generated cash and prioritised according to business need.

Supplier payments

During the year, Dstl paid 81 per cent of approved invoices within five days (against the target set by government of 80 per cent).

Dividends

A dividend of £8.5 million will be paid in respect of 2010/11 (2009/10: £4 million), based on Dstl's Return on Capital Employed (ROCE) target of 3.5 per cent.

Post balance sheet events

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 prepared under International Financial Reporting Standards (IFRS), as adapted for the public sector in the Government Financial Reporting Manual (FReM), issued by HM Treasury. There have been no new accounting standards, amendments or interpretations that affect the financial statements and no changes in accounting policy.

Outlook

In the current economic climate, Dstl's financial outlook contains additional uncertainty. Care is being taken to minimise financial risk where customers have not agreed funding levels. Dstl will continue to build on the success of its i lab programme and the cost control regime established in 2010/11. Priority will be given to investments that improve efficiency and reduce the cost base further.

Alliances and partnerships

Our Strategic Relations campaign has this year brought emphasis and energy to our relationships with industry, academia, public sector research establishments and our key overseas partners, in line with major developments in national defence and security policy.

The National Security Strategy emphasised the importance of enhancing the UK's bilateral relationships with new partner nations, such as India. In conjunction with MOD and UKTI DSO[1], we have led on the development of a new bilateral Letter of Arrangement on defence research and technology with DRDO[2] India. We are now laying the groundwork for further agreements of this type.

We have moved forward in linking Dstl's approach to structured strategic relationship management with that of DE&S and others, building on both our own Relationship Maturity Model and the recently launched British Standard BS11000 on Managing Collaborative Business Relationships. This is a standard publicly endorsed by Ministers. In exploiting the standard, we are not only aligning with established best practice but also delivering real business benefit from closer collaborative working where it really matters.

Following on from work aimed at identifying our most immediate priorities for new bilateral agreements, we have agreed a Statement of Principles setting out shared aspirations for closer working with the Atomic Weapons Establishment. Several joint programmes are already planned or under way and are expected to lead to major new joint facilities and significant overall cost savings to defence.

We have strengthened our university visit programme and launched a series of relationship management workshops, including an event with Cranfield University at the Defence Academy. These events have spawned new collaborative initiatives and improved understanding of how universities can help defence and vice versa. Dstl continues to be widely respected in academia and more than 40 staff now hold academic appointments with universities (see profile on page opposite). These appointments help to raise greater awareness about the work of Dstl and MOD and the application of science and engineering skills in the defence context. Building on our close working relationship with the French Government, we have also recently launched a new Anglo-French PhD scheme with the Direction Générale de l'Armement (DGA) to build a joint community of future scientists in key areas of S&T.

Closer to home, we are also working with the UK Research Councils, including in support of Research Councils UK's 'Global Uncertainties' programme.

We have focused on adopting a more proactive and – where possible – leading role in our engagement with industry on defence research and development. We have also established a much higher profile for Dstl with the major national defence and security sector trade associations and Knowledge Transfer Networks.

Dstl has always been critically dependent on the expertise, facilities, equipment and knowledge outside the laboratory. This year's work means that we are now increasingly able to manage those dependences in a strategic way – and to reap the benefits for MOD and wider UK defence interests.

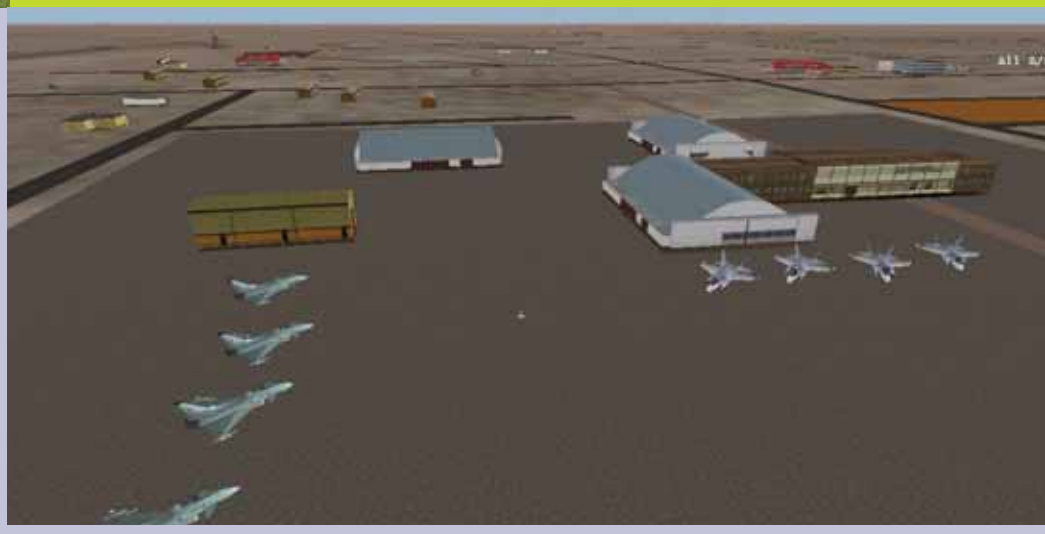
[1]UK Trade and Investment Defence & Security Organisation
[2]Indian Defence Research and Development Organisation

profile: Sharing the expertise

Julie Gadsden, from Joint Systems Department, was appointed as a Visiting Professor in Integrated Systems Design at the University of Kent in July 2010. This is part of an initiative funded by the Royal Academy of Engineering to help students gain a better understanding of real-world systems engineering. Julie's role also helps to raise the profile of MOD and Dstl in the university sector amongst the staff and a new generation of scientists and engineers. Julie is teaching engineering students at Masters level with a particular focus on systems engineering. She has introduced students to systems concepts using real-world examples from across Dstl. These have covered a variety of issues from understanding system boundaries and thinking beyond the technology through to the challenges of managing complex projects.

"I've really enjoyed working with the next generation of engineers and widening their horizons by sharing my experiences in systems engineering," says Julie. "In my view, this kind of activity has an important role to play in raising Dstl's profile amongst engineering students and their academic supervisors – and I hope that the students will be able to apply what they have learnt in their future careers and that some will consider roles within MOD/Dstl in the future."
In addition to Julie's visiting professorship, Dstl also hosted a networking conference with the University of Kent in November 2010. This has sparked a number of possible future collaborations in areas as diverse as human factors, information technology, energy/battery technology and horizon scanning.

profile: Simulator success



Dstl provides critical support to UK and international air programmes through the Cutlass air combat simulator. Cutlass simulates a variety of air-to-air and air-to-ground missions with military aircrew flying up to 10 cockpit stations, providing a realistic scenario with target and threat entities, background civilian aircraft and ground vehicles. Cutlass's visualisation tools give pilots and analysts significant insight to the often complex capabilities modelled in the simulator.
Cutlass was primarily created to assess the operational effectiveness of the F-35 Joint Strike Fighter (JSF), which will enter UK service as the Joint Combat Aircraft (JCA). The simulator has also been used more recently to model Typhoon. Cutlass trials enable defence customers to develop and evaluate UK concepts of operation, weapons strategy and training. This, in turn, helps to gather supporting evidence for capability and procurement decisions.
The Cutlass team, comprised of experts from Dstl's Air and Weapons Systems Department, develops and manages the simulator. They bring a wealth of experience in systems and modelling developed through many years' involvement in aircraft programmes. As a result, Cutlass is regarded as a key simulation asset, both nationally and internationally, and an important tool to supporting the wider US-led F-35 programme.

Over the past year, the Cutlass team has conducted UK work to evaluate air-to-air missile employment on Typhoon and JCA and to explore F-35's capabilities during close air support missions. The US Marine Corps has recently used Cutlass to investigate F-35's capabilities and the US is planning further trials in 2011. Individual JSF partner nations also use Cutlass, with more trials planned for 2012.
Cutlass remains a key capability for the UK and wider international defence community and the Dstl team looks set to respond to a broadening programme of work over the coming months and years.

Our people

The quality and commitment of our people are critical to Dstl's success and we understand the importance of staff engagement to organisational performance.

In 2010, we participated for the first time in the Civil Service People Survey that measures staff engagement. Despite the current financial constraints and speculation over job losses in the public sector, the vast majority of our staff participated in the survey and we achieved an engagement score of 64 per cent. This places Dstl in the top quartile as a high performing organisation within the public sector.

Our staff continue to be highly motivated by what they do with 94 per cent finding their work interesting and 68 per cent proud to tell others that they are part of Dstl. We received positive feedback on leadership and managing change. However, we need to improve the visibility of our senior managers and give more people the opportunity to contribute their views on decisions that affect them.

Learning and development is vital if we are to attract, develop and retain the best people. Many people speak highly of the career opportunities and training and development in Dstl. Last year, more than 250 people achieved a career level promotion, including six who became Fellows and Senior Principals – noted experts within their fields. However, there is still a perception that career paths are not always clear and we need to help people understand their options and make the best choices.

Our line managers play a valuable role in the workplace but we must do more to ensure that our leaders have all the support, tools and skills they need. In addition to developing people management skills, we must also focus on developing the skills of those responsible for technical and programmes leadership.

It is not just our staff who see Dstl positively. We have worked hard to raise our profile and reputation as a great place to work. This year, we have been nominated for several recruitment awards, reinforcing our position as a place where S&T graduates want to work.

Attracting and retaining the best staff remains a top priority and we recruited 78 permanent staff during the year. Workforce agility is extremely important and, while our resignation rates remain low at 4 per cent, we are actively changing our ratio of temporary to permanent staff through the increased use of fixed-term appointments. Over the year, our permanent headcount has fallen from 3696 to 3613 (3585 to 3501 full-time equivalents).

Giving people a good grounding in core business and technical skills is critically important so we have introduced a two-year graduate development programme that provides the basis for professional accreditation. We currently have 121 people on secondments to industry, Other Government Departments (OGDs) and wider MOD. We have also welcomed 67 inward secondees.

The recent survey showed that some staff do not feel that their pay adequately reflects their performance, although most staff are satisfied with the total benefits package offered by the organisation. Indeed, all of our staff benefit from flexible working and more than 300 people work part time.

Our relationship with the Trades Unions (TUs) is very important to us and we continue to work in partnership on issues such as site relocation and making the most of our total reward strategy within the confines of a pay freeze.

Dstl has a strong diversity and equal opportunities policy. In the past year, we have updated our Diversity Action Plan, which is focused on ensuring that all of our people understand what our diversity policy means, checking that we have appropriate policies and processes in place, and monitoring the effectiveness of our approach. We have also run diversity training for senior managers.

We are committed to supporting people with disabilities and we are proud to be accredited to the 'Positive about Disability' two ticks scheme. We fully support the career development of people with disabilities and constantly work with individuals to make adjustments, allowing them to access promotion opportunities within Dstl.

The health, safety and wellbeing of our staff is of paramount importance. Earlier this year, Dstl received Crown Censure* for the tragic death of scientist Terry Jupp who sustained fatal injuries during an explosives trial at Shoeburyness in 2002. Over the past nine years, Dstl has developed and implemented new approaches to managing health and safety. Most recently, this has included a new method for benchmarking performance and regular reporting on health and safety issues to senior management. Our regulators indicate that our approach is sound and, in some cases, 'best in class'.

During the past year, an average of 4.9 days per person were lost to sickness – which is considerably lower than the UK norm and a decrease of 7.5 per cent from the previous year. We believe that this is in part due to the introduction of the employee assistance programme and the roll out of improved absence management, which focuses on 'return to work' interviews.

*Crown censure is a procedure where the Health and Safety Executive summons a Crown employer to be censured for a breach of the Health and Safety at Work Act (1974).

A leading recruiter
Dstl has forged a reputation as a leading national employer. In the past year, Dstl has re-entered the Times Top 100 Graduate Employers list – the most widely read graduate careers directory at the UK's top universities. It is read by more than 40 per cent of final-year students – more than double the readership of other national graduate recruitment career directories. The directory is compiled from the results of face-to-face interviews with more than 17,000 final-year students. Dstl's place in this prestigious directory supports continuing work to recruit graduate talent to join the organisation.

Other recent successes include a high ranking (39th position) in the Guardian's Top 300 Graduate Employers' Survey and 70th place in the Graduate 100 list. Dstl was also shortlisted for the Best Public Sector Internships title in the National Council for Work Experience awards.

Statement by Dstl Trades Unions

Overview
The public sector is going through a period of considerable uncertainty and this is naturally impacting on staff morale across the Civil Service, including Dstl. The emerging austerity agenda has presented many challenges for Dstl management and the Trades Unions (TUs) with concerns about redundancies and detrimental changes to terms and conditions. These factors have generated significant workloads for TU representatives who continue to work with management in raising issues that are important to our members.

Site rationalisation
In the past three years, Dstl has consolidated its activities on to three core sites. The subsequent relocations still present issues for some staff who see their allowances declining in real terms. Dstl is now looking at the potential closure of Fort Halstead, which is naturally causing concern for staff on that site. The TUs are actively participating in this debate, recognising the potential impact of the site's closure.

Employee relations
The Consultative Forum continues to provide opportunities for the TUs to engage with the Dstl Board and Executive on key issues affecting Dstl. The Joint Negotiating Forum also provides a sound basis for honest and frank discussions with management, although there is still room for improvement in how we make best use of this meeting. We look forward to working with management on this issue.

This year has seen further staff-related changes to processes as part of the ongoing refresh of the Dstl Management System. The level of consultation with the TUs on these changes has been good. However, the TUs are concerned that some middle managers apply local interpretations of Dstl policies that are detrimental to staff.

Terms and conditions
Public sector staff are facing significant changes to terms and conditions, including reduced redundancy terms and less favourable pensions, which have inevitably affected morale across Dstl.

Health and safety
The TUs continue to have an important role to play in helping Dstl's management to maintain a safe working environment. This is achieved through participation in consultative forums, investigations and workplace inspections. Despite the efforts of senior management, some examples of staff safety representatives not being invited to participate in safety inspections are still being seen.

Capability
The TUs remain concerned that the continued spending cuts in military research are having a long-term impact on some capability areas. We also remain concerned over a perceived lack of technical career paths.

Job security
The impending reorganisation within MOD has led to uncertainty about job security. As a Trading Fund, Dstl is not directly affected, although there is concern that major staff reductions across MOD will result in redundancies in Dstl. The TUs will work constructively with Dstl to manage the implications of any significant reduction in income and would wish to be engaged as early as possible to minimise the detrimental impact on staff and Dstl's business.

profile: Vehicle design steps up a gear

Foxhound – an innovative lightweight vehicle that offers world-class blast protection – will enter service in early 2012 thanks to Dstl.

MOD identified an urgent requirement to replace the SNATCH Land Rover with a lightweight patrol vehicle that offered higher levels of protection.

Dstl worked with DE&S to identify the specific requirements for this new vehicle in terms of protection, weight and manoeuvrability – instead of modifying a commercial-off-the-shelf product. Once the requirements had been identified, Dstl helped DE&S to assess industry proposals and select candidate suppliers. A pan-Dstl team worked together to agree the protection specifications, drawing on its recognised defence-wide knowledge and experience of armour research programmes. The team then designed and guided the trials programme – including simulating IED explosions.

Andrew Baxter, Technical Leader for protection on the project, said: "We started with a blank piece of paper and defined the requirements for the new vehicle. This creative wheels-up approach means that the vehicles, for their weight, are world class in terms of protection against IEDs. Foxhound will undoubtedly help to reduce the loss of life and serious injury among front line troops."

Force Protection Europe was selected as the preferred bidder and Dstl has continued to guide the design. The Foxhound project is the first time a vehicle has been designed from scratch to meet an operational requirement for Afghanistan. The vehicle provides unprecedented levels of blast protection for a vehicle of its size and it does so with a significantly lighter weight than previously achievable.

The development of Foxhound is taking place in an incredibly short timeframe – from concept to production in 36 months. The first vehicles are expected to be available to troops for training in 2011.

Foxhound is also the first DE&S project to mandate the use of the Generic Vehicle Architecture. This will provide an open systems approach to the design of the electronics system and enable a genuine 'plug and play' environment for future system upgrades. This is expected to generate significant cost savings over the life of a vehicle platform.

The Foxhound vehicles will be built in the UK, thereby reinforcing the position of UK defence manufacturing on the world stage. The UK defence industry will derive significant benefit from sales of these vehicles in this newly developing market sector and there is great potential for international sales.

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Awards and honours


Frances Saunders with Christopher Newton


Paul Curtis

Dstl staff are frequently 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.

Front line support
Three scientists from Fort Halstead have been honoured with OBEs for their outstanding work that has directly saved lives on the front line. Robin Hiley and Jonathan Jefferis have both been recognised for their development of leading-edge IED capabilities. Les Tippin has also been honoured for his work in setting up a groundbreaking new facility that has had a significant impact on the Counter-IED fight in Afghanistan.

Focused efforts
David Blacknell, Christopher Finch and Daniel André were jointly awarded the prestigious John Benjamin prize for their pioneering work on the Model Based Processor (MBP). The MBP is a new algorithm which produces robust, well-focused and accurate Synthetic Aperture Radar (SAR) imagery. Using this high-fidelity imagery, it is possible to identify subtle changes over mountainous terrain – see page 33.

Holliday for Senior Fellow
Paul T Curtis, a Senior Fellow from Physical Sciences Department, has been awarded the Holliday prize by the Institute of Materials, Minerals and Mining. This prize was awarded in recognition of Paul's lifelong achievements in the field of composite materials and for his efforts in bringing together academia and industry. Paul recently patented work on structural super capacitors that has the potential to revolutionise power storage in military and civilian equipment.

Steely thinking
Peter Brown gave the 58th Hatfield Memorial Lecture at the University of Sheffield in December 2010. Professor Brown's lecture covered a wide range of groundbreaking steel technologies, including his own work on Super Bainite steel. Such an invitation is a rare honour bestowed on only a few of the world's leading scientists and metallurgists. The lecture is named after Dr William Hatfield, the inventor of stainless steel. It aims to promote leading-edge research in the areas of metals and allied branches of sciences.

Armour success
Dstl was one of four finalists for the MacRobert Award that recognises pioneering work in engineering. CAMAC® Armour, which has been developed by Dstl and NP Aerospace, can protect against a range of threats from low-level 'nuisance' attacks through to roadside bombs and IEDs. It represents the first in-service use of combinations of ceramics, glass-fibre composites and world-leading polymers. The MacRobert Award is one of the most prestigious awards in engineering and previous winners include IBM, Arup and Rolls-Royce. This year's winner was Microsoft.

Investor in people
Dstl was awarded the Institute of Physics Award for Best Practice in Professional Development 2010. This significant award is a reflection of Dstl's investment in continued professional development.

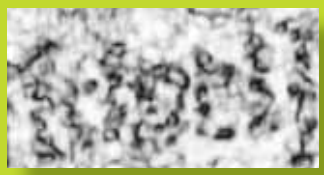
International accolade
Tim Wright, from Environmental Sciences Department, has been awarded a Certificate of Recognition from the US Department for Homeland Security while on secondment to the Home Office. Tim has been working on a networked biological detection system and carrying out collaborative testing with the Chemical and Biological Division of the US department.

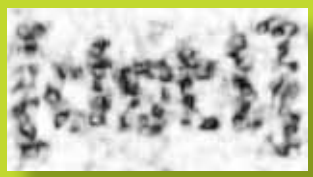
Meritorious service
Christopher Newton, a former administrative assistant at Dstl, has been honoured with the Imperial Service Medal for 'meritorious services rendered' after 31 years' service in administrative roles with MOD. Chris, who retired recently, joined the Royal Aircraft Establishment at Farnborough in June 1978.

profile: A mountainous challenge

Dstl scientists have developed a groundbreaking radar imaging technique that provides more sensitive detection of surface changes in mountainous terrain. This enables MOD to identify activities, such as vehicle movements, in challenging terrains using a long range radar sensor capable of day-and-night operation in all weathers.

Synthetic Aperture Radar (SAR) imaging techniques have been exploited in the operational context since the 1990s. In particular, the use of Coherent Change Detection (CCD) images to identify changes in a scene imaged at two different times has provided an important capability for our armed forces.





However, the quality of the CCD images can be affected, in part, by the terrain. So, if the region is flat, the SAR images will be well focused whereas, over particularly hilly or mountainous areas, the imagery will be poorly focused. This results in low 'coherence' (or contrast) over the scene – making the detection of any changes more difficult.

The Dstl team has introduced a Digital Elevation Model of the area being imaged so that the radar energy can be focused onto the 'actual' profile of the terrain. This creates high-quality SAR images with a greater level of coherence – thus producing clearer imagery over mountainous terrain.

In recognition of this groundbreaking work, the Dstl team was awarded a commendation from MOD's Chief Scientific Adviser in September 2010 and the prestigious John Benjamin Memorial Prize in February 2011.

Left: The new technique (on the right) demonstrates the improved imagery on the Dstl logo.

Robin Hiley OBE

CSA commendations

In 2010/11, 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 included:

Contribution to the Dstl Science Gateways team – Darren Watts, Merfyn Lloyd, Claire Burt, Alexis Hammer, David Fry, Rob Baldock, Sue Haines, Clare Griffiths, Peter Douglass, Andrew Stocks, Jim Wood, Andrew Robertson, Nigel Paling, Owen Griffiths, Tim Bagley, Hamish Smith, Dominic Cockcroft and Mike Larner.

Outstanding support to the Future Rapid Effect System and Specialist Vehicle Warrior programmes – Alex Lambert, Ben Whitaker, Gavin Jessup, David Shepherd, Jonathan Millard, Tom Stuart and Mark Saunders.

Delivery of state-of-the-art image exploitation techniques – the Dstl MATISSE team (Anthony Stott, Peter Harvey, Robert Butcher and John Dawson). Andy Todd was also a critical contributor to this work.

Development of a groundbreaking radar imaging technique – Christopher Finch, Andrew Bennett, David Blacknell, Matthew Nottingham and Daniel André.

Delivery of world-class explosive ordnance device capability – the IED Detect team within the Electronic Force Protection Group (Russell Hyland and Darren Riley).

Delivery of an innovative war game in support of government policy makers – the Schiltron team (including Dstl staff Paul Rayfield and David Hunter).

Groundbreaking contribution to the Counter-IED research programme – the IED Detect Tiger team (including John Ardis, David Burrows, Chris Reynish, Jonathan Howe, Graham Pitt, Grant Richardson, Dave Sherburn, Darren Smith and Robin Williamson together with other MOD and industry staff).

Leadership of the Centre for Defence Enterprise – Helen Almey

Driving force behind the Counter-IED research programme – Michael Green

Exceptional contribution to improving survival on the battlefield – Emrys Kirkman

Delivery of leading-edge technical innovations that have saved lives in theatre – Nigel Paling.

Sustainability

At Dstl, we are committed to building a sustainable future for each other, our community and our environment. We run a comprehensive sustainability programme that encompasses environmental management, green travel, education outreach and charitable giving.

Environmental
We continue to deliver improvements in the areas of waste, energy efficiency and carbon reduction. We are now recycling or re-using 92 per cent of our waste – which significantly exceeds MOD and government targets.

In line with wider government, we have challenging targets to meet on reducing carbon emissions. We have put in place a range of measures to help increase energy efficiency. Around 50 per cent of key buildings on the Dstl estate are now sub-metered. This is enabling us to identify high energy use activities and pinpoint opportunities for efficiencies.

Dstl is currently investigating renewable energy options with a wind turbine project at Portsdown West. A feasibility study to install biomass (wood chip) boilers has also recently been completed – and the results are currently being analysed.

We are also focusing on rationalising our buildings to create efficiencies. In the future, we will need to consider new ways of working and innovative approaches, such as greater desk sharing and more remote working, to meet our legislative requirements.

Travel
We have committed to reducing business travel by 10 per cent by March 2012 (from a 2007 baseline), which will also help to lower our carbon emissions. We continue to extend the range, frequency and affordability of sustainable travel options for our staff.

We run a comprehensive range of shuttle and public bus services and inter-site buses have recently been trialled successfully. We also run a dedicated car share matching scheme and 20 per cent of staff are now using car sharing for work travel. Staff can also purchase train tickets on site and make savings on advance ticket prices.

More than 250 staff currently take part in Dstl's cycle-to-work scheme and regular cycle safety and repair workshops are held across Dstl. We are also working closely with the local authorities to improve the cycle infrastructure around our sites.

Finally, telepresence facilities will become available at our core sites in 2011. This will reduce the need for our staff to travel between sites. Dstl is piloting this technology for MOD and government.

Community
In the past year, our staff have raised more than £15,000 through dedicated events for a wide range of national and local charities. For the next three years, we will be focusing our support on one main national charity – Help for Heroes (H4H). The charity, which has been chosen by our staff, is close to the hearts of many people in the local communities around our sites.

We encourage staff to undertake community volunteering. This delivers many benefits in terms of building closer community links and helping staff to develop team working and leadership skills.

Many staff also work as Science, Technology, Engineering and Maths (STEM) ambassadors in local schools, helping to inspire young people to pursue careers in these areas. In 2010/11, around 150 staff took part in more than 60 school events. These included career seminars for A-level students, interactive workshops in primary school classes, and participation in after-school clubs.

Fundraising for the Soldiers, Sailors, Airmen and Families Association

profile: The commuter challenge

For the third year running, Dstl achieved a top-place ranking in the Portsmouth Commuter Challenge in May 2010.
Dstl staff saved 18,482 miles during the week (equivalent to 7262kg of carbon emissions), which was the most miles saved by any organisation taking part. Overall, Dstl was within the top three companies of the large employer group.

During the week, Dstl also trialled a number of inter-site coach services. This allowed staff to work during their business journey whilst also reducing the number of car trips between the core sites and making efficient use of their travelling time. This is a concept that Dstl is investigating further.

> Sustainability is not just a green issue. It's critical to ensuring that our armed forces retain their operational effectiveness.

profile: A sustainable fighting force

Dstl has an important role to play in helping MOD to become more sustainable in its operations. Dstl Capability Adviser Matt Summers is responsible for advising MOD on a range of issues from climate change through to fossil fuel depletion.

"Sustainability is a major challenge for MOD," says Matt. "Sustainability is not just a 'green' issue. It's critical to ensuring that our armed forces retain their operational effectiveness as well as reducing our environmental impact.

"As an example, MOD currently uses more than 1 billion litres of fuel per year – which is a massive amount. So, we need to examine and develop suitable alternatives to ensure that the Armed Forces can continue to operate in the future.

"Reducing our dependence on fossil fuels will also help us to reduce our logistics requirements which will, in turn, help to reduce costs."

In April 2010, MOD launched its Sustainability S&T programme to address these issues. This programme is split into five themes, which include energy and emissions, climate change and natural resource availability.

Dstl plays a critical role in this programme and Matt works closely with colleagues across MOD to oversee a wide range of related projects.

Dstl has, for example, recently provided an assessment of the future security of supply of certain critical materials. Dstl is also working with wider MOD and industry to look at alternatives to fossil fuels – ranging from the use of sail technology to enhance wind turbines through to systems to convert waste heat into power for ships.

"My role is to help MOD identify key sustainability priorities and look at ways in which S&T can provide the solutions," explains Matt.

Matt has been involved in sustainability issues since 2002, when he joined Dstl.

"I have worked on a wide array of challenging projects," says Matt. "I have, for instance, helped to develop an environmental planning tool to enable Commanding Officers to assess the risk of active sonar transmissions on marine mammals. This has been rolled out across the Fleet and ours was the first navy in the world to have adopted this technical approach.

"I'm still advising BAE Systems and the Royal Navy on the marine mammal protection tool – to ensure that the advice it gives is based on the most current science and remains fit for purpose in supporting the Royal Navy."

"No day is the same in my job," explains Matt. "I'm providing advice on issues that will affect the future defence of the UK in critical ways – which is very rewarding."

Corporate governance

Our Board of Directors as at 31 March 2011

Non-Executive Directors

Sir Richard Mottram – Chairman
Appointed 01 August 2008

Sir Richard is currently Chairman of Amey plc, Vice Chairman of the Ditchley Foundation, board member of Ashridge Business School, and a Visiting Professor of the London School of Economics. He was formerly a civil servant and held a number of Permanent Secretary appointments from 1992-2007, including in the Office of Public Service and Science, 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.

Elisabeth Astall
Appointed 01 September 2009

Elisabeth Astall has served in a variety of senior management roles, most recently as Director of Accenture UK. She has worked with a range of 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 she serves with the London School of Economics Council of Governors.

Emma Davies
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.

Lord May of Oxford
Appointed 01 March 2006

Lord May has an internationally distinguished scientific career, which 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 01 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 03 May 2006

Prior to taking up her current role, 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 07 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
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.

Please note that all appointment dates relate to current roles on the Executive.

Jill Cook – Operations Director/ Interim Infrastructure Director
Appointed 14 June 2010

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 human factors physiologist before moving into management.

Jonathan Lyle – Programme Office Director
Appointed 01 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.

Dstl Board and Executive

The Board

Sir Richard Mottram	Non-Executive Chairman	
Frances Saunders	Chief Executive	
Jonathan Lyle	Programme Office Director	
Peter Starkey	Deputy CE/Strategy and Implementation Director	
Mark Alexander	Finance Director	
Barbara Busby	Human Resources and Communications Director	
Jill Cook	Operations Director	until 13 06 2010
	Interim Infrastructure Director	from 14 06 2010
Elisabeth Astall	Independent Non-Executive Director	
Emma Davies[1]	Non-Executive Director	
Jonathan Knowles	Independent Non-Executive Director	resigned 17 01 2011
Lord May of Oxford	Independent Non-Executive Director	
Christopher Swinson	Independent Non-Executive Director	

The Executive

Frances Saunders	Chief Executive	
Jonathan Lyle	Programme Office Director	
Peter Starkey	Deputy CE/Strategy and Implementation Director	
Mark Alexander	Finance Director	
Andrew Bell	Chief Technical Officer (Acting)	
Barbara Busby[2]	Human Resources and Communications Director	
Jill Cook	Operations Director	until 13 06 2010
	Interim Infrastructure Director	from 14 06 2010
Brian Court[3]	Infrastructure Director	
Robert Eason	Programme Director Technology Exploitation	
Mark Fulop[4]	Programme Director Strategy and Programme Management	from 11 06 10 to 12 12 2010
	Programme Director Security Science and Technology	from 13 12 2010
Christopher Gibson	Programme Director Defence Capabilities and Systems	from 01 04 2010
Jennifer Henderson	Acting Operations Director	from 14 06 2010
Michael Steeden	Strategic Relations Director	
Peter Thompson[5]	Programme Director Security Science and Technology	from 01 04 2010 to 13 12 2010

[1] Emma Davies resigned from the Board on 1 April 2011 and was succeeded with immediate effect by John Neilson, Director of Financial Management for MOD.
[2] Formally appointed on 19 August 2010 (fulfilled the role in an acting capacity from 23 May 2009 to 18 August 2010).
[3] Absent on special paid leave.
[4] Fulfilled the role of Programme Director Strategy and Programme Management in an acting capacity from 15 April 2010 to 11 June 2010.
[5] Took up a secondment to MOD Head Office to support the Chief Scientific Adviser.

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 bonus arrangements fall under SCS rules rather than the Dstl performance-award system.
The remaining Executive Directors are Dstl employees and subject to the same performance-related remuneration policy as all other Dstl staff. The Non-Executive Directors are not Dstl employees (with the exception of one director who is employed by MOD) and they are paid a fee for their services.

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
The Constitutional Reform and Governance Act 2010 requires Civil Service appointments to be made on merit and on the basis of fair and open competition. The recruitment principles published by the Civil Service Commission specify the circumstances when appointments may be made otherwise.
Unless otherwise stated, the officials named in this report hold appointments that are open-ended. 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.

*There is a fifth Director who is a member of the SCS but he is on secondment from MOD and is paid by MOD.

Dstl Board Directors' remuneration (excluding pension arrangements)
This information is subject to audit.

Name	Salary band 2010/11 £'000	Salary band 2009/10 £'000	NCPA† 2010/11 £'000	NCPA 2009/10 £'000	Fee 2010/11 £'000	Fee 2009/10 £'000
Sir Richard Mottram					35 - 40	35 - 40
Frances Saunders	100 - 105	90 - 95	5 - 10	10 - 15		
Jonathan Lyle	90 - 95	5 - 10 *90 - 95*	5 - 10			
Peter Starkey[1]	85 - 90	80 - 85		5 - 10		
Mark Alexander[1]	95 - 100	30 - 35 *95 - 100*				
Barbara Busby[2]	70 - 75	60 - 65 *70 - 75*	5 - 10	5 - 10		
Jill Cook	70 - 75	70 - 75	0 - 5	5 - 10		
Elisabeth Astall[3]					20 - 25	10 - 15 *20 - 25*
Emma Davies[4]						
Jonathan Knowles					15 - 20 *20 - 25*	10 - 15 *20 - 25*
Lord May of Oxford					20 - 25	20 - 25
Christopher Swinson					20 - 25	20 - 25

Figures in italics denote full-year equivalent salary.
†Non-consolidated Performance Awards (NCPAs).
NCPAs have been awarded as indicated for 2010/11.
Fees have been paid as indicated for 2010/11. Jonathan Knowles' fee for 2009/10 was accrued and paid in 2010/11.
The salary bands set out above relate only to emoluments paid during the period of each Director's membership of the Dstl Board.
No Board members, key managerial staff or other related parties have undertaken any material transactions with Dstl during the year.
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.
[1]The 2009/10 salary figures for Mark Alexander and Peter Starkey have been amended to include the taxable allowances paid to them.
[2]The 2009/10 salary full-year equivalent for Barbara Busby has been amended to reflect the correct salary.
[3]Elisabeth Astall donates her fee to charity.
[4]Emma Davies has received no fee; she represented MOD as a Non-Executive Director.

Dstl Board pension provision

This information is subject to audit.

Name	Real increase in pension [and related lump sum at pension age] £'000	Total accrued pension at pension age at 31/03/11 [and related lump sum] £'000	Cash equivalent value at 31/03/10* £'000	Cash equivalent value at 31/03/11 £'000	Real increase in cash equivalent transfer value as funded by employer £'000
Frances Saunders[1]	2.5 - 5.0	50 - 55	776.0	953.0	71.0
Jonathan Lyle	0 - 2.5	45 - 50	680.0	776.0	-3.0
Peter Starkey[2]	-2.5 - 0 [-2.5 - 0]	30 - 35 [100-105]	683.0	767.0	-2.0
Mark Alexander	0 - 2.5	5 - 10	56.0	89.0	22.0
Barbara Busby	0 - 2.5	5 - 10	73.0	114.0	18.0
Jill Cook	0 - 2.5 [0 - 2.5]	25 - 30 [85 - 90]	497.0	576.0	9.0

*The actuarial factors that were used in the Cash Equivalent Transfer Value (CETV) calculation were changed during 2010 due to changes in demographic assumptions and the move from the Retail Prices Index (RPI) to the Consumer Prices Index (CPI) as the measure used to uprate Civil Service pensions. This means that the CETV in this year's report for 31/03/2010 will not be the same as the corresponding figure shown in last year's report.
With the exception of Frances Saunders, Jonathan Lyle and Barbara Busby, who belong to the Premium Civil Service Pension Scheme, all Directors belong to the Classic or Nuvos Civil Service Pension Schemes. All schemes are part of the Principal Civil Service Pension Scheme. See Note 6 to the accounts.
[1]In the 2009/10 report, two of the figures quoted for Frances Saunders were incorrect and should have read 'cash equivalent value as at 31/03/2010 – £837,000' and 'real increase in cash equivalent transfer value as funded by employer – £81,000'.
[2]In the 2009/10 report, two of the figures quoted for Peter Starkey were incorrect and should have read 'cash equivalent value as at 31/03/2010 – £732,000' and 'real increase in cash equivalent transfer value as funded by employer – £46,000'.

Executive committee remuneration (excluding pension arrangements)

This information is subject to audit.

Name	Salary Band 2010/11 £'000	Salary Band 2009/10 £'000	NCPA 2010/11 £'000	NCPA 2009/10 £'000
Frances Saunders	100 - 105	90 - 95	5 - 10	10 - 15
Jonathan Lyle	90 - 95	5 - 10 *90 - 95*	5 - 10	
Peter Starkey[1]	85 - 90	80 - 85		5 - 10
Mark Alexander[1]	95 - 100	30 - 35 *95 - 100*		
Andrew Bell	75 - 80	15 - 20 *60 - 65*	5 - 10	0 - 5
Barbara Busby[2]	70 - 75	60 - 65 *70 - 75*	5 - 10	5 - 10
Jill Cook	70 - 75	70 - 75	0 - 5	5 - 10
Brian Court[3]	60 - 65	55 - 60		0 - 5
Robert Eason[4]				
Mark Fulop	70 - 75		0 - 5	
Christopher Gibson	75 - 80	75 - 80	5 - 10	5 - 10
Jennifer Henderson	55 - 60 *65 - 70*		0 - 5	
Michael Steeden[5]	55 - 60 *75 - 80*	70 - 75 *75 - 80*		
Peter Thompson	75 - 80	75 - 80	0 - 5	5 - 10

Figures in italics denote full-year equivalent salary.
NCPAs have been awarded as indicated for 2010/11.
The salary bands set out above relate only to emoluments paid during the period of each Director's membership of the Dstl Executive Committee.
No Executive Committee members, key managerial staff or other related parties have undertaken any material transactions with Dstl during the year.
There was no non-cash element of the remuneration package.

Except for payments made to MOD for the secondment of Robert Eason, no amounts were payable to third parties for the services of a senior manager.
[1]The 2009/10 salary figures for Mark Alexander and Peter Starkey have been amended to include the taxable allowances paid to them.
[2]The 2009/10 salary full-year equivalent for Barbara Busby has been amended to reflect the correct salary.
[3]Brian Court is absent on special paid leave.
[4]Robert Eason is an inward secondee from MOD. He is paid by MOD – SCS Pay Band 1 (£58,200 – £117,800). Dstl is invoiced for his services at a total cost of £89,843.68.
[5]Michael Steeden is employed by Dstl 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 pension age] £'000	Total accrued pension at pension age at 31/03/11 [and related lump sum] £'000	Cash equivalent value at 31/03/10* £'000	Cash equivalent value at 31/03/11 £'000	Real increase in cash equivalent transfer value as funded by employer £'000
Frances Saunders[1]	2.5 - 5.0	50 - 55	776.0	953.0	71.0
Jonathan Lyle	0 - 2.5	45 - 50	680.0	776.0	-3.0
Peter Starkey[2]	-2.5 - 0 [-2.5 - 0]	30 - 35 [100 - 105]	683.0	767.0	-2.0
Mark Alexander	0 - 2.5	5 - 10	56.0	89.0	22.0
Andrew Bell	0 - 2.5 [5.0 - 7.5]	15 - 20 [45 - 50]	171.0	228.0	28.0
Barbara Busby	0 - 2.5	5 - 10	73.0	114.0	18.0
Jill Cook	0 - 2.5 [0 - 2.5]	25 - 30 [85 - 90]	497.0	576.0	9.0
Brian Court[3]	0 - 2.5 [0 - 2.5]	15 - 20 [55 - 60]	211.0	248.0	5.0
Robert Eason[4]					
Mark Fulop	0 - 2.5 [2.5 - 5.0]	20 - 25 [60 - 65]	274.0	307.0	12.0
Christopher Gibson	0 - 2.5 [0 - 2.5]	25 - 30 [75 - 80]	406.0	476.0	12.0
Jennifer Henderson	0 - 2.5 [5.0 - 7.5]	10 - 15 [40 - 45]	116.0	153.0	21.0
Michael Steeden[5]	0 - 2.5	40 - 45	721.0	854.0	8.0
Peter Thompson	0 - 2.5 [2.5 - 5.0]	15 - 20 [50 - 55]	180.0	225.0	16.0

*The actuarial factors that were used in the CETV calculation were changed during 2010 due to changes in demographic assumptions and the move from RPI to CPI as the measure used to uprate Civil Service pensions. This means that the CETV in this year's report for 31/03/2010 will not be the same as the corresponding figure shown in last year's report.
With the exception of Frances Saunders, Jonathan Lyle, Barbara Busby and Michael Steeden, who belong to the Premium Civil Service Pension Scheme, all Directors belong to the Classic or Nuvos Civil Service Pension Schemes. All schemes are part of the Principal Civil Service Pension Scheme. See Note 6 to the accounts.
[1]In the 2009/10 report, two of the figures quoted for Frances Saunders were incorrect and should have read 'cash equivalent value as at 31/03/2010 – £837,000' and 'real increase in cash equivalent transfer value as funded by employer – £81,000'.
[2]In the 2009/10 report, two of the figures quoted for Peter Starkey were incorrect and should have read 'cash equivalent value as at 31/03/2010 – £732,000' and 'real increase in cash equivalent transfer value as funded by employer – £46,000'.
[3]Brian Court is absent on special paid leave.
[4]Robert Eason is an inward secondee from MOD. He is paid by MOD – SCS Pay Band 1 (£58,200 – £117,800). Dstl is invoiced for his services at a total cost of £89,843.68.
[5] Michael Steeden is employed by Dstl on a part-time basis. He has a preserved pension and lump sum that has been notionally aggregated for the purposes of this report.

Frances Saunders
Chief Executive
16 June 2011

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 Minister of State for Defence Equipment, Support and Technology[1] assists him in the discharge of his responsibilities with regard to Dstl. 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, which 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 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.

Following a major streamlining review within MOD, Dstl assumed responsibility for managing MOD's entire non-nuclear research programme from 1 April 2010. This includes formulating and leading the delivery of both Dstl-led and externally led research assignments through the DST Programme Office – further details are provided on pages 48 and 49.

The purpose of the system of internal control
The system of internal control is designed to manage risk to reasonable levels 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 2011, 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 'Risk management – principles and guidelines' – the British/International Standard (BS ISO 31000).

Dstl's procedures set out a framework to ensure consistency in the way that risks are identified and then assessed, in terms of probability and impact. Each risk has an owner. Specific plans are developed and actions taken in order to improve Dstl's position. This activity is recorded to facilitate ongoing management and reporting, and to inform future work.

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. This policy, encompassing audit and resilience, is implemented in line with Dstl's procedures, set out in the MS.

[1]Minister for Strategic Defence Acquisition Reform undertook this role until May 2010.

Risks are identified against a framework of Dstl's Critical Success Factors and a set of generic risks. Risks are considered at different levels in the organisation and aggregated, escalated or delegated as appropriate to ensure that they are owned and managed at the correct level. As shown, there are both departmental and programme axes.

The Executive reviews the corporate risks, the status of controls and the progress of agreed actions at regular meetings, both collectively and in individual meetings with the Corporate Risk Manager. The risk registers are managed by departmental and functional operational managers who consider risk management and common or cross-cutting risk areas at their regular joint meetings. Risks best managed at directorate level are held in the risk register that is maintained by the relevant director.

Training on risk management is carried out through dedicated workshops with particular groups such as project managers and departmental management teams, according to need. This approach has been extended and formalised through the year and that process will continue over the coming months, with increased use of computer-based training.

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 have reported progress in both the development and implementation of the risk process at appropriate Audit Committee meetings.

PKF[2] comment on risk management, 2011:
"The risk management framework has continued to operate at all levels of the organisation with a clear process for identifying, assessing, communicating and managing risks. The arrangements are being embedded into the new areas of activity within the Programme Office, with risks and the way that they are being managed monitored closely."

Resilience
During 2010, Dstl's approach to business continuity management and to the management of incidents/ emergencies has been further refined and improved. We have adopted the principles of 'corporate resilience' and defined a single resilience process which incorporates emergency preparedness, emergency management and business continuity management, with seamless transition between the phases. This is set out in the MS.

The business continuity management system is based on MOD's Joint Service Publication 503 and external good practice. The organisation is continuing to work towards full compliance with ISO 25999 part 2. At present, supplier management is the only area of non-compliance – an issue which cannot be fully resolved until MOD commercial policy on this subject is available.
Early in 2010, the business continuity management system was independently audited by MOD and PKF. The overall rating obtained was 'substantial assurance'.

Information management
As an MOD Trading Fund, Dstl is required by the Cabinet Office to include a statement on information management within its Statement on Internal Control.

Information Assurance (IA) Maturity[3]
MOD conducted an integrated IA Peer Review on Dstl in January 2011 to assess maturity. Dstl maintains a sharp focus in this key performance area, fully appreciating the importance in relation to the increasing cyber threat and the need to drive towards greater Information and Communications Technology (ICT) efficiency.

Extract from MOD IA Peer Review Report:
"We believe that Dstl is already close to achieving Level 3 IA maturity. The remaining few areas for improvement could be tackled quickly but validated performance of the new CIS contract may inhibit achievement of the overall objective until June 11."

Dstl agreed an eight-point action plan with MOD to achieve IA maturity Level 3. Dstl will be assessed in June 2011 when best practice and lessons learned will be shared with the broader MOD community to assist in their approach towards the Level 3 target of April 2012.
Information Handling Training (IHT)
Dstl embedded the mandated IHT (developed by the Cabinet Office) into Dstl's training regime and the contract of our new ICT service provider, Steria.
Data Protection and Data Handling Review (DHR) compliance. Dstl implemented a continuous monitoring regime of DHR compliance through the Dstl Joint Compliance Committee and is satisfied of full compliance in this key area.
Data loss and IA incidents. There have been a number of minor data loss and IA incidents, which have been effectively managed and appropriately investigated. There have been seven cases where sanctions have been applied within this reporting period.

[2] Dstl internal auditor 2010/11
[3] Level 1 – Initial: Main Board aware of criticality of IA.
Level 2 – Established: IA processes institutionalised.
Level 3 – Business enabling: All critical areas of the business subject to a robust IA regime.

Management processes
The Dstl Management System (MS) has continued to evolve, with approximately a quarter of the processes rewritten or published for the first time in 2010/11. The MS formed a key part of Dstl's ISO 9001:2008 audit by Lloyd's Register Quality Assurance (LRQA) in June 2010, and was judged to be "a significant improvement and found to be readily accessible and considered 'user friendly' across the Dstl community sample". It was described as 'an example of best practice'.

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 also by 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/functional level review budgets on a monthly basis and reforecast quarterly. Business cases for capital expenditure are reviewed and approved by my Investment Panel. Additional requirements for reporting and approvals under the new government spending controls and transparency agenda have been fully implemented.

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 is in place to address weaknesses, learn lessons and ensure continuous improvement of the system.

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 2010/11, 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 have attended all Audit Committee meetings along with representatives from the National Audit Office and PKF. We maintain a view of how other government bodies operate audit arrangements and my Quality Manager attends another MOD Trading Fund Audit Committee to help identify good practice. The Audit Committee Chairman initiated a review of Audit Committee effectiveness in 2010 using the NAO self-assessment process. The Audit Committee was considered sound but some recommendations to improve effectiveness were made and are being implemented.

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 2010/11. Regular reports to senior management and the Dstl Audit Committee provide independent assessment of the system of internal control and include recommendations for improvement, where appropriate.

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. Although the overall governance structure has not significantly changed since the last review, it was recognised that government restrictions have been imposed on some areas of expenditure. Progress had been made against the issues identified in the 2010 review and it was appropriate for the Framework Document to be updated to reflect current best practice. No major governance weaknesses were identified.

New DST Programme Office
As outlined on page 46, Dstl has taken on an additional responsibility for managing MOD's non-nuclear research programme through the DST Programme Office. PKF undertook an initial audit of the Programme Office to determine the effectiveness of these new arrangements in October

2010 and areas for improvement were identified. Good progress has been made in addressing these issues and a subsequent audit, conducted in March 2011, concluded: "The Programme Office has continued to make strong progress in establishing arrangements for meeting Dstl's enhanced role. It is currently in a position where it is able to manage the R&D programme on behalf of the Defence R&D Board and to provide suitable representation on S&T issues for the MOD more generally."

Financial controls

Dstl has a mature framework of financial control built around effective delegation and rigorous financial processes. These controls are monitored and audited throughout the year and there are no significant problems identified.

External reviews

LRQA – ISO 9001:2000 and TickIT Guide issue 5

The Dstl MS was subject to a surveillance visit by LRQA in June 2010, and a follow-up review in December 2010. 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.

LRQA – ISO 14001:2004

Dstl has continued to maintain an ISO 14001:2004 certificated environmental management system at Fort Halstead and Portsdown West where improvements in environmental performance have been demonstrated. We are progressing well towards achieving certification at Porton Down and stage one assessment was completed in February 2011. Two major non-conformities were identified, which will need to be resolved prior to stage two assessment in July.

MOD's Chief Information Officer (CIO)

The MOD CIO Information Assurance Management Peer Review Report for 2010/11 dated 20 January 2011 stated: "Dstl is an impressive organisation: it is sharply focused upon success in IA and totally committed to optimising its approach to effective information management. It remains an exemplar in many areas and success in meeting the Defence Board's IA objectives is assured. It has also tackled a number of challenges over the past year, such as the integration of staff and capability from the former SIT TLB (Science Innovation Technology Top Level Budget).

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.

Significant internal control problems

There are currently no significant internal control problems. 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.

PKF stated: "Based on the audit work carried out we have concluded that overall the system of internal control is adequate for the purposes of Dstl and was found to be operating effectively in most key areas."

Sustainability reporting

Targets on sustainability are captured in the Dstl Sustainable Development Action Plan (SDAP). Progress against these targets is monitored by the Dstl Sustainability Steering Group and also tracked by LRQA. Key objectives from the SDAP are also captured in Dstl's balanced scorecard and tracked as part of overall performance management. Further information about sustainability is provided on pages 34 to 36 and 81 to 82.

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 and must give a true and fair view of the state of affairs of Dstl, and of its profit, changes in Taxpayers Equity 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 or 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 2010/11, Dstl has not had any incidents that have resulted in the unauthorised disclosure of protected personal data. Dstl continues its emphasis on effective Information Assurance through the measures and controls surrounding the Senior Information Risk Owner, and ensuring that information compliance standards are maintained through the Dstl Joint Compliance Committee.

Frances Saunders
Chief Executive
16 June 2011

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 (Dstl) for the year ended 31 March 2011 under the Government Trading Funds Act 1973. These comprise the Group and Trading Fund Statements: of Comprehensive Income, Changes in Taxpayers' Equity, Financial Position, and Cash Flows 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 Dstl, Chief Executive and auditor
As explained more fully in the Statement of Dstl's and Chief Executive's Responsibilities, Dstl and its 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, certify and report on the financial statements in accordance with the Government Trading Funds Act 1973. I conducted my audit in accordance with 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 Dstl's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by Dstl; and the overall presentation of the financial statements. In addition, I read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements. If I become aware of any apparent material misstatements or inconsistencies, I consider the implications for my certificate.

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 which 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 which govern them.

Opinion on financial statements
In my opinion:

- the financial statements give a true and fair view of the state of Dstl's affairs as at 31 March 2011 and of its profit 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 given in the Business Review, Our People, Sustainability and Corporate Governance sections of 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 which I report to you if, in my opinion:

- adequate accounting records have not been kept; or
- the financial statements and the part of the Remuneration Report to be audited 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

27 June 2011

Statement of Comprehensive Income for the year ended 31 March 2011

	Note	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Turnover	**2**	**563.6**	**435.3**	**561.0**	**434.4**
External programme		116.4	–	116.4	–
Other		447.2	435.3	444.6	434.4
Cost of sales		**(238.7)**	**(122.6)**	**(238.2)**	**(122.6)**
External programme		(116.4)	–	(116.4)	–
Other		(122.3)	(122.6)	(121.8)	(122.6)
Net income		**324.9**	**312.7**	**322.8**	**311.8**
Operating expenses		(283.6)	(291.8)	(282.1)	(290.2)
Operating profit	**3**	**41.3**	**20.9**	**40.7**	**21.6**
Share of associate's income		–	–	–	–
Finance income	7	0.2	0.1	0.2	0.1
Finance expense	8	(1.1)	(1.2)	(1.1)	(1.2)
Profit before taxation		**40.4**	**19.8**	**39.8**	**20.5**
Taxation expense	9	(0.1)	–	–	–
Profit for the year		**40.3**	**19.8**	**39.8**	**20.5**
Dividend	10	(8.5)	(4.0)	(8.5)	(4.0)
Retained profit for the year		**31.8**	**15.8**	**31.3**	**16.5**
Other comprehensive income					
Net gain/(loss) on revaluation of property, plant and equipment		8.3	(8.4)	8.3	(8.4)
Net gain on revaluation of available-for-sale investments		0.6	0.5	0.5	0.5
Net gain on revaluation of intangible assets		0.1	0.1	0.1	0.1
Total comprehensive income for the year		**40.8**	**8.0**	**40.2**	**8.7**

Statement of changes in taxpayers' equity for the year ended 31 March 2011

Group

	Note	Retained earnings £ million	Public dividend capital £ million	Government grant reserve £ million	Revaluation surplus £ million	Total taxpayers' equity £ million	Total comprehensive income £ million
Balance at 1 April 2009		**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)	(1.1)
Surplus on revaluation of properties	11				3.2	3.2	3.2
(Deficit) on application of modified historic cost accounting to property, plant and equipment	11				(10.5)	(10.5)	(10.5)
Surplus on revaluation of non-current financial asset investments	12				0.5	0.5	0.5
Surplus on application of modified historic cost accounting to intangible assets	13				0.1	0.1	0.1
Net gains and losses recognised in the Statement of Comprehensive Income					(7.8)	(7.8)	(7.8)
Net profit for the period		19.8				19.8	19.8
Dividend	10	(4.0)				(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**	**8.0**
Government grants received				3.6		3.6	
Release of grant to income				–		–	
Transfer to retained earnings					(1.2)	(1.2)	(1.2)
Surplus on revaluation of properties	11				1.8	1.8	1.8
Surplus on application of modified historic cost accounting to property, plant and equipment	11				7.7	7.7	7.7
Surplus on revaluation of non-current financial asset investments	12				0.6	0.6	0.6
Surplus on application of modified historic cost accounting to intangible assets	13				0.1	0.1	0.1
Net gains and losses recognised in the Statement of Comprehensive Income					9.0	9.0	9.0
Net profit for the period		40.3				40.3	40.3
Dividend	10	(8.5)				(8.5)	(8.5)
Transfer from revaluation surplus		1.2				1.2	
Modified historic cost accounting	11, 13	0.3				0.3	
Balance at 31 March 2011		**181.9**	**50.4**	**4.9**	**40.4**	**277.6**	**40.8**

Statement of changes in taxpayers' equity for the year ended 31 March 2011
Trading Fund

	Note	Retained earnings £ million	Public dividend capital £ million	Government grant reserve £ million	Revaluation surplus £ million	Total taxpayers' equity £ million	Total comprehensive income £ million
Balance at 1 April 2009		**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)	(1.1)
Surplus on revaluation of properties	11				3.2	3.2	3.2
(Deficit) on application of modified historic cost accounting to property, plant and equipment	11				(10.5)	(10.5)	(10.5)
Surplus on revaluation of non-current financial asset investments	12				0.5	0.5	0.5
Surplus on application of modified historic cost accounting to intangible assets	13				0.1	0.1	0.1
Net gains and losses recognised in the Statement of Comprehensive Income					(7.8)	(7.8)	(7.8)
Net profit for the period		20.5				20.5	20.5
Dividend	10	(4.0)				(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**	**8.7**
Government grants received				3.6		3.6	
Release of grant to income				–		–	
Transfer to retained earnings					(1.2)	(1.2)	(1.2)
Surplus on revaluation of properties	11				1.8	1.8	1.8
Surplus on application of modified historic cost accounting to property, plant and equipment	11				7.7	7.7	7.7
Surplus on revaluation of non-current financial asset investments	12				0.5	0.5	0.5
Surplus on application of modified historic cost accounting to intangible assets	13				0.1	0.1	0.1
Net gains and losses recognised in the Statement of Comprehensive Income					8.9	8.9	8.9
Net profit for the period		39.8				39.8	39.8
Dividend	10	(8.5)				(8.5)	(8.5)
Transfer from revaluation surplus		1.2				1.2	
Modified historic cost accounting	11, 13	0.3				0.3	
Balance at 31 March 2011		**183.9**	**50.4**	**4.9**	**39.2**	**278.4**	**40.2**

The notes on pages 58 to 80 form an integral part of these accounts.

Statement of Financial Position as at 31 March 2011

	Note	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Assets					
Non-current assets					
Property, plant and equipment	11	213.8	206.2	213.8	206.2
Financial assets	12	3.9	3.3	2.4	1.9
Investment in associate	12	–	–	–	–
Intangible assets	13	3.3	2.6	3.3	2.6
Receivables	16	0.8	0.7	4.4	4.0
Total non-current assets		221.8	212.8	223.9	214.7
Current assets					
Work in progress	15	1.9	2.6	1.9	2.6
Receivables	16	166.9	128.1	166.8	127.9
Cash and cash equivalents	17	72.2	40.3	70.3	39.7
Total current assets		241.0	171.0	239.0	170.2
Total assets		462.8	383.8	462.9	384.9
Current liabilities					
Trade and other payables	18	154.5	116.4	153.8	116.1
Short-term provisions	19	2.0	3.1	2.0	3.1
Total current liabilities		156.5	119.5	155.8	119.2
Non-current assets plus net current assets		306.3	264.3	307.1	265.7
Non-current liabilities					
Other payables	18	25.9	29.2	25.9	29.2
Long-term provisions	19	2.8	3.4	2.8	3.4
Total non-current liabilities		28.7	32.6	28.7	32.6
Assets less liabilities		**277.6**	**231.7**	**278.4**	**233.1**
Taxpayers' equity					
Public dividend capital	24	50.4	50.4	50.4	50.4
Government grant reserve	25	4.9	1.3	4.9	1.3
Revaluation surplus		40.4	31.4	39.2	30.3
Retained earnings		181.9	148.6	183.9	151.1
Total taxpayers' equity		**277.6**	**231.7**	**278.4**	**233.1**

The financial statements were signed on 16 June 2011
The financial statements were authorised for issue on 14 July 2011*

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 2011

	Note	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Cash flows from operating activities					
Net profit before taxation		40.4	19.8	39.8	20.5
Adjustment for:					
Depreciation	3, 11	11.5	12.1	11.5	12.1
Loss on sale of property, plant and equipment	3	0.1	–	0.1	–
(Profit) on sale of non-current financial asset investments	3, 12	(1.7)	(0.3)	–	–
Amortisation	3, 13	1.4	1.2	1.4	1.2
Operating profit before working capital changes		51.7	32.8	52.8	33.8
Decrease in work in progress		0.7	0.4	0.7	0.4
(Increase)/decrease in receivables		(39.0)	9.3	(39.3)	8.5
Increase/(decrease) in payables		42.0	(4.8)	41.7	(5.1)
Use of provisions		(2.9)	(7.3)	(2.9)	(7.3)
Finance income		(0.2)	(0.1)	(0.2)	(0.1)
Finance expense		1.1	1.2	1.1	1.2
Net cash inflow from operating activities		53.4	31.5	53.9	31.4
Taxation paid		–	–	–	–
Cash flows from investing activities					
Purchases of property, plant and equipment		(16.1)	(28.8)	(16.1)	(28.8)
Proceeds from sale of non-current financial asset investments		1.9	0.3	–	–
Purchases of intangible assets		(2.0)	(1.2)	(2.0)	(1.2)
Loans made to other bodies		–	–	–	(0.1)
Repayment of loans made to other bodies		–	–	0.1	–
Finance income		0.2	0.1	0.2	0.1
Net cash used in investing activities		(16.0)	(29.6)	(17.8)	(30.0)
Cash flows from financing activities					
Loans received from MOD		–	10.7	–	10.7
Repayment of loans from MOD		(3.2)	–	(3.2)	–
Interest paid on loans		(1.9)	(1.0)	(1.9)	(1.0)
Receipt of government grant		3.6	1.3	3.6	1.3
Dividend paid		(4.0)	(3.0)	(4.0)	(3.0)
Net cash received/(used) from financing activities		(5.5)	8.0	(5.5)	8.0
Net increase in cash and cash equivalents		31.9	9.9	30.6	9.4
Brought forward cash and cash equivalents		40.3	30.4	39.7	30.3
Carried forward cash and cash equivalents	**17**	**72.2**	**40.3**	**70.3**	**39.7**

Notes to the Accounts

1 Accounting policies

(a) Statement of accounting polices

These financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as adapted for the public sector in the 2010/11 Government Financial Reporting Manual (FReM), issued by HM Treasury.
The accounts of all Group undertakings are drawn up to 31 March 2011.

(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 rolling programme of 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. The guidelines set out recommendations intended to represent current best practice on the valuation of equity investments. All of the businesses under consideration have no significant revenues, profits or positive cashflows. Consequently, the approach selected to determine fair value is 'price of recent investment'. The accuracy of this valuation method depends on the length of time that has elapsed since the most recent investment. This is because the investment's fair value may have changed during this intervening period.
Where appropriate, a business-in-use valuation based on discounted projected cash flows has been adopted for specialised facilities. Further information on the business-in-use valuation adopted for the Biological High Containment Facility is disclosed in Note 11.
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). The subsidiary's available-for-sale investment, Enigma Diagnostics Limited, has not been consolidated under International Accounting Standard (IAS)31, interests in joint ventures, as the effect of applying IAS31 is not material 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.

(e) Property, plant and equipment

All assets are independently inspected on a three-year rolling programme. Where revaluations are carried out, they are performed using Royal Institute of Chartered Surveyors (RICS) methods.
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 flows 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 –
Modified historic cost accounting.
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

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 work on a contract for a customer is chargeable to the customer. Internally funded research expenditure is charged to the Statement of Comprehensive Income as incurred.

(i) Work in progress
Work in progress represents costs incurred on firm-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) on cost-plus contracts 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 Comprehensive Income 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. Long-term loans are measured at amortised cost using the effective interest rate method. Investments available for sale are measured at fair value.

(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 the Statement of Comprehensive 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 Comprehensive Income 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 Comprehensive Income 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. Ploughshare Innovations Limited is liable to pay corporation tax in the UK on its taxable profits. This is incorporated into the Group financial statements. See Note 9 for further information.

(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-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. More than 95 per cent of Group turnover is derived from UK customers and consequently a geographical analysis of results is not included.

(u) Reserves within taxpayers' equity
The government grant reserve represents funding provided by Other Government Departments for the purchase or construction of specific assets. The reserve is released to the Statement of Comprehensive Income during the useful economic life of the asset. The revaluation surplus represents taxpayers' equity arising from increases in the value of non-current assets.

(v) Changes to accounting policies in the current reporting period
Chapter 8 of the FReM adapts IAS36, impairment of assets, to allow scoring of all impairments that are caused by a clear consumption of economic benefit to the Statement of Comprehensive Income. This could potentially increase the value of impairments charged to the Statement of Comprehensive Income, specifically in respect of the revaluation of properties. However, this amendment did not have an impact during the current reporting period, and it is not expected to have a future material impact on the financial statements of the Group.

(w) IFRS, amendments and interpretations in issue but not yet effective or adopted
IAS8, accounting policies, changes in accounting estimates and errors, requires disclosures in respect of new IFRS, amendments and interpretations that are or will be applicable after the reporting period. There are a number of standards, 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.

IFRS7 financial instruments: disclosure
There are amendments to the existing standard, which is effective for accounting periods beginning on or after 1 January 2011.

IFRS3 business combinations
There are amendments to the existing standard, which is effective for accounting periods beginning on or after 1 July 2010.

IAS1 presentation of financial statements
There is an amendment to the existing standard, which is effective for accounting periods beginning on or after 1 January 2011.

IAS27 consolidated and separate financial statements
An amendment to this standard providing a clarification. This is effective for accounting periods beginning on or after 1 July 2010.

None of these new or amended standards and interpretations are likely to be applicable or are expected 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 2011:

Chapters 5, 6, 7, and 11 accounting for capital government grants and similar financing from non-government sources
An adaption to IAS20 to extend all capital non-exchange transactions. Also adapts IAS16 to supplement disclosure requirements to show how additions have been financed.

None of these changes to the FReM are expected 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:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
MOD:	513.5	385.9	513.5	385.9
Research: external programme	116.4	–	116.4	–
Research: other	242.8	226.0	242.8	226.0
Non-research	154.3	159.9	154.3	159.9
Non-MOD:	50.1	49.4	47.5	48.5
Government departments	27.9	30.4	28.0	30.5
Non-Exchequer income	19.8	18.4	19.5	18.0
Non-Exchequer equity sales, royalty income and licensing income	2.4	0.6	–	–
Total	**563.6**	**435.3**	**561.0**	**434.4**

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 other geographical market has contributed significantly to turnover. See Note 31 for operating segment disclosures.

The Programme Office
From 1 April 2010, the Trading Fund has taken on the role of leading and managing the CSA's non-nuclear defence research programme through a newly created Programme Office. Further details are provided on page 8.

3 Operating profit

This is stated after charging/(crediting):

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Depreciation charge for year:	11.5	12.1	11.5	12.1
Depreciation of owned property, plant and equipment	11.0	11.1	11.0	11.1
Exceptional costs of impairment of property, plant and equipment	1.7	1.9	1.7	1.9
Exceptional costs of reversal of impairment of property, plant and equipment	(2.0)	–	(2.0)	–
Adjustment valuation of property, plant and equipment	0.8	(0.9)	0.8	(0.9)
Amortisation charge for the year:	1.4	1.2	1.4	1.2
Amortisation of software licences	1.3	1.0	1.3	1.0
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 owned property, plant and equipment	(0.1)	–	(0.1)	–
Profit on disposal of non-current financial asset investments	–	(0.3)	–	–
Operating lease rentals:				
– property	4.1	6.4	4.1	6.4
– plant	0.1	0.1	0.1	0.1
Travel, subsistence and hospitality (excluding exceptional costs of i lab)	2.9	3.3	2.9	3.3
Foreign exchange losses	–	0.2	–	0.2
Auditor's remuneration and expenses*	0.1	0.1	0.1	0.1
Exceptional costs of i lab	2.8	7.2	2.8	7.2
Other operating income	(5.9)	(6.8)	(6.7)	(7.6)

*During the year ending 31 March 2011, the Group did not contract any non-audit services from its external auditor, the National Audit Office (NAO). During the year ending 31 March 2010, the Group did not contract any non-audit services from the NAO.

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 capital and reserves, being public dividend capital, long-term loans, and reserves.
The calculation of capital employed has been revised to reflect that defined in the HM Treasury minute relating to the Trading Fund's objectives for the period 2009/10 to 2013/14.
The comparatives have been restated on this basis. The previous calculation defined capital employed as total assets less current and non-current liabilities, but excluding provisions. If this calculation had been adopted for the current reporting period, the annual ROCE would have been 15.9 per cent for the Group (2009/10: 8.8 per cent) and 15.6 per cent for the Trading Fund (2009/10: 9.1 per cent).
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.

The annual ROCE calculation is:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Profit on ordinary activities before interest and taxation	41.3	20.9	40.7	21.6
Public dividend capital	50.4	50.4	50.4	50.4
Long-term loan	25.8	29.0	25.8	29.0
Reserves	227.2	181.3	228.0	182.7
Capital employed at year end	303.4	260.7	304.2	262.1
Average capital employed during the year	282.1	251.9	283.2	252.9
ROCE	**14.6%**	**8.3%**	**14.4%**	**8.5%**

The average ROCE for the period 1 April 2009 to 31 March 2011 is:

	1 April 2009		31 March 2011	
	Group £ million	Trading Fund £ million	Group £ million	Trading Fund £ million
Average profit on ordinary activities before interest and taxation for the two years to 31 March 2011			31.1	31.2
Public dividend capital	50.4	50.4	50.4	50.4
Long-term loan	21.5	21.5	25.8	25.8
Reserves	171.1	171.8	227.2	228.0
Total capital employed	243.0	243.7	303.4	304.2
Average capital employed during the period			273.2	274.0
ROCE			**11.4%**	**11.4%**

5 Trading Fund Board members' emoluments

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

	2011 £'000	2010 £'000
Salaries, NCPAs and fees	**1,172.1**	**1,028.0**

6 Employee information

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

	2011 Group Number	2010 Group Number	2011 Trading Fund Number	2010 Trading Fund Number
Professional and technical staff	3,058	2,885	3,046	2,874
Administrative and industrial staff	529	647	526	645
Secondees	117	104	117	104
Total	**3,704**	**3,636**	**3,689**	**3,623**

Full-time equivalents consist of employees with permanent UK employment contracts and fixed-term appointments.
In addition, there were 192 agency and contract staff utilised during the year (2009/10: 192) at a cost of £16.7 million (2009/10: £15.9 million). The comparitive for 2009/10 has been restated on a full-time equivalent basis.

Staff costs incurred during the year in respect of these employees were:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Wages and salaries	134.7	130.1	134.0	129.5
Social security costs	11.0	10.6	10.9	10.5
Other pension costs	24.7	23.6	24.6	23.5
Total	**170.4**	**164.3**	**169.5**	**163.5**

During the year, £0.1 million staff costs were capitalised.
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 the Trading Fund 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 2010/11, normal employers' contributions of £24.6 million were payable to the PCSPS (2009/10: £23.5 million) at one of four rates in the range 16.7 per cent to 24.3 per cent of pensionable pay, based on salary bands (2009/10: 17.1 per cent to 25.5 per cent). The scheme's Actuary usually reviews employer contributions every four years following a full scheme valuation. The contribution rates are set to meet the cost of the benefits accruing during 2010/11 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 £157,149 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 £11,209, 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 2011 were £13,245. 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 £21 for this individual.

Exit packages
Redundancy and other departure costs have been paid in accordance with the provisions of the Civil Service Compensation Scheme, a statutory scheme, made under the Superannuation Act 1972. Exit costs are accounted for in full in the year of departure. Where the Trading Fund has agreed early retirements, the additional costs are met by the Trading Fund and not by the PCSPS. Ill-health retirement costs are met by the pension scheme and are not included in the table below. Comparatives for the previous year are shown in brackets.

Exit package cost band	Number of compulsory redundancies	Number of other departures agreed	Total number of exit packages by cost band
Less than £10,000	0 (5)	0 (1)	0 (6)
£10,000 - £25,000	0 (14)	1 (3)	1 (17)
£25,000 - £50,000	0 (9)	2 (3)	2 (12)
£50,000 - £100,000	1 (15)	5 (2)	6 (17)
£100,000 - £150,000	0 (6)	2 (0)	2 (6)
£150,000 - £200,000	0 (5)	0 (0)	0 (5)
More than £200,000	0 (5)	0 (0)	0 (5)
Total number of exit packages	1 (59)	10 (9)	11 (68)
Total cost of exit packages (£)	66,187 (4,571,329)	650,385 (291,008)	716,572 (4,862,337)

7 Finance income

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Interest received and receivable from bank accounts and short-term deposits	0.2	0.1	0.2	0.1
Total	**0.2**	**0.1**	**0.2**	**0.1**

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

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Interest paid and payable on loans	0.8	1.2	0.8	1.2
Financial instrument remeasurements	0.3	–	0.3	–
Total	**1.1**	**1.2**	**1.1**	**1.2**

Of this, £58 relates to payments made under the Late Payments of Commercial Debts (Interest) Act 1998 (2009/10: £17,839).
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. The tax charge on the profit on ordinary activities for the year was as follows:

	2011 Group £ million	2010 Group £ million
Current tax:		
UK corporation tax	0.1	–

The tax assessed for the year is lower than the standard rate of corporation tax in the UK. The difference is explained below:

	2011 £ million	2010 £ million
Group profit on ordinary activities before tax	40.4	19.8
Less Trading Fund profit (exempt) and consolidation adjustments on ordinary activities before tax	(39.7)	(20.5)
Profit/(loss) on ordinary activities before tax	0.7	(0.7)
Profit/(loss) on ordinary activities multiplied by the standard rate of corporation tax in the UK of 28 per cent (2009/10: 28 per cent)	0.2	(0.2)
Effects of:		
Depreciation in advance of capital allowances	–	–
Expenses not deductible for tax purposes	–	–
Profit on disposal of investments in advance of base cost	(0.1)	–
Unutilised trading losses carried forward	–	0.2
Current tax charge	**0.1**	**–**

Ploughshare Innovations Limited has unutilised gross trading losses carried forward of £3.5 million (2009/10: £3.5 million). No provisions for deferred tax have been made.

10 Dividends

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Ordinary dividend payable	8.5	3.0	8.5	3.0
Special dividend payable	–	1.0	–	1.0
Total	**8.5**	**4.0**	**8.5**	**4.0**

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

11 Property, plant and equipment

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 2010	22.3	134.9	0.1	70.2	8.5	37.5	273.5
Additions	–	–	–	0.3	–	9.1	9.4
Disposals	–	(0.5)	–	(3.4)	(0.3)	–	(4.2)
Transfers	0.5	25.5	–	3.3	0.5	(29.8)	–
Downward revaluation	–	–	–	–	(0.8)	–	(0.8)
Revaluations	4.8	4.2	–	2.4	–	–	11.4
Balance at 31 March 2011	**27.6**	**164.1**	**0.1**	**72.8**	**7.9**	**16.8**	**289.3**
Depreciation:							
Balance at 1 April 2010	–	(18.6)	(0.1)	(44.9)	(3.7)	–	(67.3)
Charge for year:							
historical	–	(5.9)	–	(3.3)	(1.8)	–	(11.0)
supplementary	–	(0.1)	–	(1.4)	–	–	(1.5)
downward revaluation	–	–	–	–	0.2	–	0.2
impairment	–	(1.0)	–	(0.3)	–	–	(1.3)
Disposals	–	0.6	–	3.3	0.3	–	4.2
Revaluations	–	1.2	–	–	–	–	1.2
Balance at 31 March 2011	**–**	**(23.8)**	**(0.1)**	**(46.6)**	**(5.0)**	**–**	**(75.5)**
Net modified historic cost:							
Balance at 31 March 2011	**27.6**	**140.3**	**–**	**26.2**	**2.9**	**16.8**	**213.8**
Balance at 1 April 2010	22.3	116.3	–	25.3	4.8	37.5	206.2

Land and buildings are subject to a quinquennial revaluation by an independent, professional valuer in accordance with IAS16, property, plant and equipment.
Land at Pyestock is valued annually. The latest valuation was carried out as at 31 January 2011 on a Market Value basis by Knight Frank LLP, Chartered Surveyors.
Portsdown Main was valued as at 31 January 2011 on a Market Value basis by Knight Frank LLP, Chartered Surveyors.
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 are being valued over five years beginning 1 April 2009.
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 2011
– a professional external valuation of Portsdown Main as at 31 January 2011
– 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 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
– a professional external valuation of a quarter of the building assets at Porton Down as at 31 March 2011.
The basis of the valuation for the land at Pyestock and Portsdown Main was Market Value. The valuation of Portsdown Main resulted in a reversal of impairment of £2.0 million.
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 Biological High 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 £11.0 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 £2.3 million to exclude effluent plant	24	3.5	11.1	25	2.8
2. Capacity support increased by £0.3 million from 1 April 2012	24	3.5	12.6	50	6.3
3. Decline of capacity support by £0.1 million per annum from 1 April 2015	24	3.5	7.5	25	1.9
					11.0

The business-in-use valuation extended over a period of 24 years, and cash flows were discounted at a rate of return of 3.5 per cent.
The impairment is disclosed as £1.0 million for buildings and £0.3 million for plant and machinery.

The comparatives for the year ended 31 March 2010 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 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

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 2010	–	1.9	1.9	3.3	3.3
Disposals	–	–	–	(0.5)	(0.5)
Revaluations	–	0.5	0.5	1.1	1.1
Balance at 31 March 2011	**–**	**2.4**	**2.4**	**3.9**	**3.9**

A professional independent valuation of the available-for-sale investments has been obtained by Ploughshare and the Trading Fund. 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 holdings in available-for-sale investments owned by Ploughshare, and incorporated within these Group financial statements, include Claresys Limited, Enigma Diagnostics Limited (Enigma), Esroe Limited, P2i Limited, Prokyma Technologies Limited, Remo Technologies Limited and Subsea Asset Location Technologies Limited.
During the year, Ploughshare disposed of approximately 33 per cent of its holdings of class B ordinary shares in P2i Limited. A profit of £0.9 million was realised.
During the year, Ploughshare disposed of approximately 79 per cent of its holdings in its available-for-sale investment with Enigma. A profit of £0.9 million was realised.
Enigma 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. In respect of Enigma, the BVCA valuation is prudent, based on industry standards, and reflects turnover to date. The valuation is sensitive to the 'Enterprise' value. The Enterprise value is underpinned by the price of shares issued on 28 March 2011.

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	Profit/(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 2011	2.9	0.5	3.2	4.2	(1.0)	Technology transfer management
Available-for-sale investment										
Enigma Diagnostics Limited	Great Britain	7.1%	Ordinary of 10p/ Preferred ordinary of 1p	30 April 2010	0.2	(18.1)	9.7	1.8	7.9	R&D
Management accounts for 11 months to 31 March 2011, 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 2011	0.3	–	0.4	0.1	0.3	Business support to biotechnology start ups
Management accounts for 12 months to the year ended 31 March 2011 have been used for the disclosure because audited accounts were not available.										

The comparatives for the year ended 31 March 2010 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 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**

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	Technology transfer management
Available-for-sale investment										
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.

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 2010	3.7	0.7	4.4
Additions	0.5	1.4	1.9
Transfers	1.8	(1.8)	–
Revaluations	0.3	–	0.3
Balance at 31 March 2011	**6.3**	**0.3**	**6.6**
Amortisation:			
Balance at 1 April 2010	(1.8)	–	(1.8)
Charge for year:			
historical	(1.3)	–	(1.3)
supplementary	(0.2)	–	(0.2)
Balance at 31 March 2011	**(3.3)**	**–**	**(3.3)**
Net modified historic cost:			
Balance at 31 March 2011	**3.0**	**0.3**	**3.3**
Balance at 1 April 2010	1.9	0.7	2.6

The comparatives for the year ended 31 March 2010 are:

	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 modified historic cost:			
Balance at 31 March 2010	**1.9**	**0.7**	**2.6**
Balance at 1 April 2009	2.2	–	2.2

14 Impairments

Impairments occurring during the year were either charged to Profit or Loss, or Other Comprehensive Income as follows:

Group	Note	2011 Profit or Loss £ million	2010 Profit or Loss £ million	2011 Other Comprehensive Income £ million	2010 Other Comprehensive Income £ million
Investment in Alaska Food Diagnostics Limited	12	–	–	–	0.4
Investment in Subsea Asset Location Technologies Limited	12	–	–	0.3	–
Investment in Claresys Limited	12	–	–	0.1	–
Portsdown Main site	11	(2.0)	–	–	–
Land at Pyestock	11	–	–	–	0.3
Biological High Containment Facility	11	1.3	1.8	–	–
Buildings (including MHCA*)	11	0.3	0.1	0.1	12.5
Computer equipment (MHCA)	11	0.6	(0.6)	–	–
Software licences	13	–	0.1	–	–
Total		**0.2**	**1.4**	**0.5**	**13.2**

Trading Fund	Note	2011 Profit or Loss £ million	2010 Profit or Loss £ million	2011 Other Comprehensive Income £ million	2010 Other Comprehensive Income £ million
Portsdown Main site	11	(2.0)	–	–	–
Land at Pyestock	11	–	–	–	0.3
Biological High Containment Facility	11	1.3	1.8	–	–
Buildings (including MHCA)	11	0.3	0.1	0.1	12.5
Computer equipment (MHCA)	11	0.6	(0.6)	–	–
Software licences	13	–	0.1	–	–
Total		**0.2**	**1.4**	**0.1**	**12.8**

*Modified Historic Cost Accounting

15 Work in progress

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Central government bodies	1.6	1.9	1.6	1.9
Local authorities	–	0.1	–	0.1
Non-public sector organisations	0.3	0.6	0.3	0.6
Total	**1.9**	**2.6**	**1.9**	**2.6**

16 Trade receivables and other current assets

Amounts falling due within one year:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Trade receivables	**23.5**	**25.3**	**23.4**	**25.2**
Central government bodies	21.0	22.8	21.0	22.8
Non-public sector organisations	2.5	2.5	2.4	2.4
Amounts recoverable under contracts	**139.6**	**98.7**	**139.6**	**98.7**
Central government bodies	138.5	98.0	138.5	98.0
Non-public sector organisations	1.1	0.7	1.1	0.7
Deposits and advances – staff receivables	**0.2**	**0.2**	**0.2**	**0.2**
Other receivables	**0.5**	**0.9**	**0.5**	**0.9**
Central government bodies	0.5	0.6	0.5	0.6
Non-public sector organisations	–	0.3	–	0.3
Prepayments and accrued income	**3.1**	**3.0**	**3.1**	**2.9**
Local authorities	0.3	–	0.3	–
Non-public sector organisations	2.8	3.0	2.8	2.9
Total	**166.9**	**128.1**	**166.8**	**127.9**

Amounts falling due after more than one year:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Deposits and advances – staff receivables	**0.8**	**0.7**	**0.8**	**0.7**
Other receivables	**–**	**–**	**3.6**	**3.1**
Central government bodies	–	–	3.6	3.1
Loan due from Ploughshare Innovations Limited	**–**	**–**	**–**	**0.2**
Total	**0.8**	**0.7**	**4.4**	**4.0**

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 two per cent. The loan arrangement is on demand, with a total limit set at £500,000. The loan, which was repayable on the third anniversary of the agreement, 6 April 2011, was repaid during the year.
Within the Trading Fund's other receivables falling due after more than one year is a current account with Ploughshare Innovations Limited of £3.6 million (2009/10: £3.1 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

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Balance brought forward	40.3	30.4	39.7	30.3
Net change in cash and cash equivalent balances	31.9	9.9	30.6	9.4
Balance carried forward	**72.2**	**40.3**	**70.3**	**39.7**
The following balances were held at:				
Commercial banks and cash in hand	5.3	0.3	3.4	0.3
Short-term investments	66.9	40.0	66.9	39.4
Balance carried forward	**72.2**	**40.3**	**70.3**	**39.7**

18 Trade payables and other liabilities

Amounts falling due within one year:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Current part of long-term loan payable to MOD	**3.2**	**3.2**	**3.2**	**3.2**
VAT	**8.9**	**9.5**	**8.9**	**9.5**
Other taxation and social security	**5.3**	**5.1**	**5.2**	**5.1**
Payments received on account	**16.3**	**16.4**	**16.3**	**16.4**
Central government bodies	12.7	12.9	12.7	12.9
Non-public sector organisations	3.6	3.5	3.6	3.5
Trade payables	**23.3**	**7.1**	**23.2**	**7.0**
Central government bodies	0.2	0.1	0.2	0.1
Trading funds	0.2	–	0.2	–
Non-public sector organisations	22.9	7.0	22.8	6.9
Other payables	**4.7**	**5.8**	**4.7**	**5.8**
Central government bodies	4.6	4.4	4.6	4.4
Non-public sector organisations	0.1	1.4	0.1	1.4
Pay and expenses – staff payables	**3.5**	**3.5**	**3.5**	**3.5**
Accruals and deferred income	**80.8**	**61.8**	**80.3**	**61.6**
Central government bodies	4.3	2.9	4.2	2.9
NHS Trusts	–	0.1	–	0.1
Local authorities	0.5	4.3	0.5	4.3
Non-public sector organisations	76.0	54.5	75.6	54.3
Staff	–	–	–	–
Dividend	**8.5**	**4.0**	**8.5**	**4.0**
Total	**154.5**	**116.4**	**153.8**	**116.1**

Amounts falling due after more than one year:

	2011 Group £ million	2010 Group £ million	2011 Trading Fund £ million	2010 Trading Fund £ million
Non-current part of long-term loan payment to MOD	**25.8**	**29.0**	**25.8**	**29.0**
Accruals and deferred income	**0.1**	**0.2**	**0.1**	**0.2**
Non-public sector organisations	0.1	0.2	0.1	0.2
Total	**25.9**	**29.2**	**25.9**	**29.2**

£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 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 2010	1.2	2.8	1.5	0.1	0.9	6.5
Provided in the year	–	0.1	1.2	–	0.7	2.0
Provisions not required written-back	(0.2)	(0.4)	(0.2)	–	–	(0.8)
Provisions utilised in the year	(1.0)	(0.7)	(0.3)	(0.1)	(0.8)	(2.9)
Balance at 31 March 2011	**–**	**1.8**	**2.2**	**–**	**0.8**	**4.8**

Analysis of expected timing of 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 2011 and 31 March 2012	–	0.5	1.2	–	0.3	2.0
Between 1 April 2012 and 31 March 2013	–	0.3	–	–	0.3	0.6
Between 1 April 2013 and 31 March 2018	–	1.0	–	–	0.2	1.2
Between 1 April 2018 and 31 March 2023	–	–	1.0	–	–	1.0
From 1 April 2023 thereafter	–	–	–	–	–	–
Balance at 31 March 2010	**–**	**1.8**	**2.2**	**–**	**0.8**	**4.8**

No amounts are expected to be called after 1 April 2023 and therefore no further analysis is necessary for amounts after this date.
The provisions have not been discounted. The effect of discounting is not material.

Infrastructure maintenance and upgrades
A provision was recognised for certain infrastructure maintenance and upgrades where the Trading Fund was legally responsible for the infrastructure concerned and there was a clear legal or constructive obligation resulting in an expected transfer of economic benefits. During the year, the obligation was settled in full.

i lab (rationalisation programme) 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. The brought forward provision has been part utilised and part released. During the year, new properties were identified where the selling price is likely to fall short of the guaranteed price. The transfer of economic benefits is expected to take place during the year ending 31 March 2012. Due to the Trading Fund's withdrawal from the Farnborough and Malvern sites, there have been redundancies for some non-mobile staff. The provision is not expected to be fully utilised until the year ending 31 March 2020.

Onerous contracts
Provisions for onerous contracts are recognised where unavoidable costs of meeting lease obligations exceed the economic benefits expected to be received under the lease. The Trading Fund has withdrawn from a site at Winfrith. Under the terms of an operating lease, there is a legal obligation to continue rental and service charge payments until 14 July 2011. A lease for a facility (owned by the Trading Fund) to remain at the Farnborough site is in place. This defers a dilapidation obligation under the Farnborough lease to beyond a year. An additional legal obligation has arisen during the year as a result of the cancellation of a contract. An assessment of the contract terms has determined the penalties that are likely to apply, which will result in the transfer of economic benefits during the year ending 31 March 2012.

Contractual disputes
During the year, a contractual dispute was settled in full.

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).

The comparatives for the year ended 31 March 2010 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 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 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.

20 Long-term loans

	2011 Group and Trading Fund £ million	2010 Group and Trading Fund £ million
Balance brought forward	32.2	21.5
New loan	–	10.7
Repayment of loan	(3.2)	–
Balance carried forward	**29.0**	**32.2**

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.

	2011 Group and Trading Fund £ million	2010 Group and Trading Fund £ million
Analysis of repayments:		
Within one year	3.2	3.2
After one year but within two years	3.2	3.2
After two years but within five years	9.7	9.7
After five years	12.9	16.1
Total	**29.0**	**32.2**

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

	2011 Group and Trading Fund £ million	2010 Group and Trading Fund £ million
Balance brought forward	33.2	22.3
New loan	–	10.7
Repayment of principal	(3.2)	–
Movement in finance charge	(0.7)	0.2
Balance carried forward	**29.3**	**33.2**

21 Commitments under leases

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

	2011 Group and Trading Fund £ million	2010 Group and Trading Fund £ million
Property:		
Due within one year	4.2	4.4
Due after one year but within five years	15.2	16.5
Total	**19.4**	**20.9**
Plant and equipment:		
Due within one year	0.1	0.1
Total	**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

	2011 Group and Trading Fund £ million	2010 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	8.5	7.3
Capital expenditure that has been authorised, but has not been provided for in the accounts	6.1	3.9
Intangible assets:		
Capital expenditure that has been contracted for, but has not been provided for in the accounts	–	1.4
Capital expenditure that has been authorised, but has not been provided for in the accounts	–	–

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.
Equity holdings of the group are classified as available-for-sale investments and are disclosed in Note 12.
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.
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 and 2 years £ million	Matures between 2 and 3 years £ million	Matures between 3 and 4 years £ million	Matures between 4 and 5 years £ million	Matures after more than 5 years £ million
Trade payables	23.3	–	–	–	–	–
Other payables:						
Staff/payroll payables	3.5	–	–	–	–	–
Taxation and social security	14.2	–	–	–	–	–
Payments on account	16.3	–	–	–	–	–
Other	4.7	–	–	–	–	–
Accruals	80.8	0.1	–	–	–	–
Provisions	2.0	0.6	0.4	0.3	0.3	1.2
Loan provided by MOD:						
Principal	3.2	3.2	3.2	3.2	3.2	13.0
Dividend	8.5	–	–	–	–	–
Total financial liabilities	**156.5**	**3.9**	**3.6**	**3.5**	**3.5**	**14.2**

The liquidity risks inherent in this are met by close management of the Group's financial assets. Amounts recoverable under contract are invoiced weekly or monthly in accordance with contract terms, 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 and 2 years £ million	Matures between 2 and 3 years £ million	Matures between 3 and 4 years £ million	Matures between 4 and 5 years £ million	Matures after more than 5 years £ million
Work in progress	1.9	–	–	–	–	–
Trade receivables	23.5	–	–	–	–	–
Amounts recoverable under contract	139.6	–	–	–	–	–
Prepayments	3.1	–	–	–	–	–
Other receivables:						
Staff receivables	0.2	0.1	0.1	0.1	0.1	0.4
Other	0.5	–	–	–	–	–
Total financial assets	**168.8**	**0.1**	**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 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 enables the Trading Fund to reserve 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 2011, the Group's exposure to currency exchange movements, denominated in sterling, is:

	US Dollar £'000	Euro £'000
Assets	2,200.3	16.1
Liabilities	647.3	31.5

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 at a fixed rate.

As at 31 March 2011, the Group's investments at fixed rates are:

Counterparty	Maturity date	Amount invested £ million	Rate %
Lloyds TSB Bank	1 April 2011	6.9	0.25
Lloyds TSB Bank	8 April 2011	5.0	0.40
Debt Management Office	8 April 2011	10.0	0.25
Debt Management Office	8 April 2011	2.0	0.25
Lloyds TSB Bank	15 April 2011	6.0	0.40
Lloyds TSB Bank	28 April 2011	7.0	0.57
Lloyds TSB Bank	28 April 2011	7.0	0.45
Lloyds TSB Bank	28 April 2011	7.0	0.59
Lloyds TSB Bank	6 May 2011	16.0	0.45

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 90 per cent of trading is undertaken with the Group's immediate owner, MOD, and more than 95 per cent of trading is undertaken with government departments. All non-Exchequer parties are credit checked prior to contract agreement and are regularly monitored. The standard term 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
4,196.1	271.4	13.5	69.2	52.8

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		23.5
Amounts recoverable under contract		139.6
Other receivables:		
Other	0.5	
Staff loans, advances and imprests	1.0	
		1.5
Cash and cash equivalents:		
Cash at bank – Lloyds TSB Bank	3.4	
Cash at bank – HSBC Bank	1.9	
Short-term investments – Lloyds TSB Bank	54.9	
Short-term investments – Debt Management Office	12.0	
		72.2
Maximum exposure to credit risk		**236.8**

The amount quoted above is the technical maximum, quantitative exposure but within this £151.8 million relates to MOD. Credit risk with MOD is minimal since it is a central government department, 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.

	2011 £ million	2010 £ million
Balance brought forward	50.4	50.4
Net movement in year	–	–
Balance carried forward	**50.4**	**50.4**

25 Government grant reserve

Group and Trading Fund

	2011 £ million	2010 £ million
Balance brought forward	1.3	–
Additions	3.6	1.3
Balance carried forward	**4.9**	**1.3**

During the year, two government grants were provided to the Trading Fund. A grant of £0.8 million was received from the Department for Transport to fund phase 1 of a specific asset.
A further grant of £2.8 million was received by the Government Communications Bureau to fund phase 2 of the same asset. The grants will be released to the Statement of Comprehensive Income during the useful economic life of the asset.

26 Analysis of changes in financing during the year

Group and Trading Fund

	Note	2011 £ million	2010 £ million
Public dividend capital:	24		
Balance brought forward		50.4	50.4
Net movement in year		–	–
Balance carried forward		**50.4**	**50.4**
Long-term loans:			
Balance brought forward		29.0	21.5
New loans received during the year		–	10.7
Transfer to payables falling due within one year		(3.2)	(3.2)
Balance carried forward	**20**	**25.8**	**29.0**

27 Losses and special payments

During the year ended 31 March 2011, there was potentially a loss exceeding £250,000 resulting from cancellation of a contract. An assessment of the contract terms has determined that penalties will apply, but final settlement will not be reached until the year ending 31 March 2012. There was one payment relating to unfair dismissal totalling £24,666.
During the year ended 31 March 2010, there were no losses or special payments exceeding £250,000. There was one severance payment made during the year totalling £12,500, and payments relating to one unfair dismissal totalling £62,452.

28 Contingent liabilities

During the year, some uncertainty has arisen concerning the deliverables of a milestone sub-contract with a value of £4.1 million, against which the Group has generated a turnover of £4.5 million. There are concerns that the output does not meet the requirements set out in the contract. Steps have been taken for an independent review of the output to provide assurance that the obligations of the contract have been met. At the Statement of Financial Position date, there was the possibility of a potential liability but this will only be confirmed following completion of the review (which is expected to report in July 2011).

29 Related-party transactions

Dstl is a Trading Fund owned by MOD.

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

	2011 £'000	2010 £'000
Sales	513,459.9	385,895.1
Purchases	23,841.8	17,652.0
Receivables	151,768.1	110,642.8
Payables	12,453.2	11,325.4

An ordinary dividend of £8.5 million, payable to MOD, was agreed. Interest paid and payable on the loans totalled £1.1 million, measured at amortised cost using the effective interest rate method. Repayments of the principal during the year totalled £3.2 million. Final repayment is due on 31 March 2020. See Note 20.

Ploughshare Innovations Limited
Ploughshare Innovations Limited (Ploughshare) 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, which was carried out under standard contract terms:

	2011 £'000	2010 £'000
Sales and other operating income	821.2	820.6
Purchases and expenses	188.8	93.6
Receivables	3,545.9	3,161.8
Payables	7.6	24.5

On 6 April 2008, a loan arrangement with Ploughshare was put in place. Ploughshare may borrow on demand, with a total limit set at £500,000. The interest rate charged is the base rate plus two per cent. The loan was repaid before the end of the financial year. Interest charged for the year was £2,179.

Ownership of the Trading Fund's holdings in its available-for-sale investment with Remo Technologies Limited transferred to Ploughshare during the reporting year ended 31 March 2007. Ownership of the Trading Fund's holdings in its available-for-sale investment with P2i Limited transferred to Ploughshare during the reporting year ended 31 March 2009. Ploughshare sold approximately 33 per cent of its holdings in P2i Limited during the current reporting year. Ownership of the investments has remained with the subsidiary undertaking during the current reporting year. The Trading Fund's holdings in its available-for-sale investment with Enigma Diagnostics Limited (Enigma) remain with the parent body. Ploughshare has its own investment in Enigma and sold approximately 79 per cent of this holding during the current reporting year. The Trading Fund's holdings in its available-for-sale investment with Alaska Food Diagnostics Limited (Alaska) transferred to Ploughshare during the reporting year ended 31 March 2006. Alaska ceased trading during the reporting year ended 31 March 2010.

Available-for-sale investments and associate

There has been no related party trading during the current financial year, or previous financial years, with the available-for-sale investments Subsea Asset Location Technologies Limited, Prokyma Limited, P2i Limited and Sherwood Therapeutics Limited. Tetricus Limited is an associate. These entities are considered to be related parties. Details of the available-for-sale investments are provided in Note 12. Sherwood Therapeutics Limited ceased trading in the current reporting year. During the year, the following trading occurred with these entities, which was carried out under standard contract terms:

	Sales		Purchases		Receivables		Payables	
	2011 £'000	2010 £'000	2011 £'000	2010 £'000	2011 £'000	2010 £'000	2011 £'000	2010 £'000
Alaska Food Diagnostics Limited	–	–	–	–	–	4.8	–	–
Claresys Limited	–	–	–	80.0	–	–	–	–
Enigma Diagnostics Limited	4.1	–	12.4	13.3	0.9	1.4	–	–
Esroe Limited	–	–	15.6	–	–	–	–	–
Remo Technologies Limited	–	–	5.7	37.4	–	–	–	–
Tetricus Limited	87.2	111.3	–	3.5	–	–	–	–

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 standard contract terms and are subject to the normal course of internal and external audit.

	Sales		Purchases		Receivables		Payables	
	2011 £'000	2010 £'000	2011 £'000	2010 £'000	2011 £'000	2010 £'000	2011 £'000	2010 £'000
British National Space Centre	–	7.8	–	–	–	–	–	–
Department for Business, Innovation and Skills	69.8	160.9	–	–	0.2	–	–	298.5
Department for the Environment, Food and Rural Affairs	183.3	89.4	44.7	31.6	–	–	0.8	9.6
Department for Transport	2,528.8	4,021.1	–	–	1,051.7	1,409.1	145.2	629.1
Engineering and Physical Sciences Research Council	–	–	413.8	172.4	–	–	112.0	172.4
Food Standards Agency	150.7	106.3	–	–	74.1	26.6	0.2	–
Government Communications Bureau	5,816.4	9,494.7	320.7	107.1	2,841.1	4,805.2	807.0	2,382.7
Health Protection Agency	1,354.2	1,150.7	244.2	233.4	384.0	96.2	109.2	47.6
Home Office	14,939.3	15,119.0	69.6	35.1	2,647.3	3,226.0	1,200.8	1,653.8
Technology Strategy Board	525.7	265.6	1,000.0	–	122.4	69.0	1,000.0	–
Cabinet Office – PCSPS	–	–	28,452.1	27,106.7	–	–	3,368.8	3,282.8
HM Revenue and Customs:								
Employer's and Employees' Income Tax and National Insurance	–	–	45,737.8	44,160.9	–	–	5,400.2	5,602.6
VAT	–	–	41,307.7	24,655.8	–	–	8,898.9	9,426.1

During the year, £0.8 million was received from the Department for Transport, and £2.8 million was received from the Government Communications Bureau as government grants. See Note 25.

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 Events after the reporting period

A revised Trading Fund Order has been laid before the Houses of Parliament with effect from 20 May 2011. The Minister for Defence Equipment, Support and Technology has approved the business case for Dstl to move off the Fort Halstead site in about five years.

31 Operating segments

Group and Trading Fund

All of the Group's business reporting segments are disclosed to enable users of these finanacial statements to evaluate the nature and financial effects of the Group's business activities. The Group's corporate support functions have been aggregated.
All operating segments derive their revenues from the provision of specialist and technical services. The Group derives more than 90 per cent of its revenues from MOD, and more than 95 per cent of its revenues from government departments. 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.

The Programme Office
From 1 April 2010, the Trading Fund has taken on the role of leading and managing the CSA's non-nuclear defence research programme through a newly created Programme Office. Further details are provided on page 8.

Operating segment analysis for the year ended 31 March 2011:

Operating segment	Revenue (internal and external) £ million	Depreciation £ million	Amortisation £ million	Impairments through profit or loss £ million	Impairments through Comprehensive Income £ 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	41.5	–	–	–	–	–	–	4.6	–	9.7	4.4
Biomedical Sciences	39.4	0.1	–	–	–	–	–	3.7	0.2	8.5	7.3
Detection	48.3	0.1	–	–	–	–	–	6.1	0.4	13.8	9.6
Environmental Sciences	19.4	0.3	–	–	–	–	–	(0.4)	0.3	3.8	1.0
Information Management	27.8	–	–	–	–	–	–	1.6	–	4.2	1.1
Joint Systems	13.6	–	–	–	–	–	–	1.0	–	3.5	2.2
Land Battlespace Systems	36.2	–	–	–	–	–	–	3.5	–	5.6	2.6
Naval Systems	30.5	0.2	–	–	–	–	–	3.3	–	4.8	1.8
Physical Sciences	41.7	0.1	–	–	–	–	–	4.2	0.5	12.9	7.0
Policy and Capability Studies	34.0	–	–	–	–	–	–	5.6	–	3.7	1.2
Programme Office	162.5	–	–	–	–	–	–	1.5	–	62.5	48.9
Security Sciences	86.8	0.5	–	–	–	–	–	4.2	2.0	28.0	13.3
Sensors and Countermeasures	46.5	0.2	–	–	–	–	–	2.8	0.6	13.2	8.7
Corporate	12.3	10.0	1.4	0.2	1.9	0.2	1.1	(10.4)	7.3	288.7	75.4
Ploughshare Innovations Limited	2.9	–	–	–	0.4	–	–	0.5	–	3.5	4.2
Internal trading group consolidation adjustments	(79.8)	–	–	–	–	–	–	–	–	(3.6)	(3.5)
Total as per financial statements	**563.6**	**11.5**	**1.4**	**0.2**	**2.3**	**0.2**	**1.1**	**31.8**	**11.3**	**462.8**	**185.2**

The 2010/11 financial year has seen a change to the reporting structure with the Trading Fund taking on the role of leading and managing the non-nuclear defence research programme through the DST Programme Office. The Counter-Terrorism Science and Technology Centre, which had previously reported as a separate operating segment, is now reporting as part of the Programme Office operating segment. The comparatives for the year ended 31 March 2010 have been re-stated to reflect this structure.

Operating segment analysis for the year ended 31 March 2010:

Operating segment	Revenue (internal and external) £ million	Depreciation £ million	Amortisation £ million	Impairments through profit or loss £ million	Impairments through Comprehensive Income £ 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
Programme Office	58.0	–	–	–	–	–	–	0.9	–	24.1	12.5
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
Corporate	12.1	10.5	1.2	1.4	12.8	0.1	1.2	(21.9)	28.5	251.6	90.2
Ploughshare Innovations Limited	1.4	–	–	–	0.4	–	–	(0.7)	–	2.3	3.7
Internal trading group consolidation adjustments	(77.7)	–	–	–	–	–	–	–	–	(3.4)	(3.4)
Total as per financial statements	**435.3**	**12.1**	**1.2**	**1.4**	**13.2**	**0.1**	**1.2**	**15.8**	**30.8**	**383.8**	**152.1**

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.

Programme Office Responsible for leading the CSA's non-nuclear research programme – designing, formulating and commissioning programmes with industry, academia and other research organisations.

Security Sciences Provides the 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.

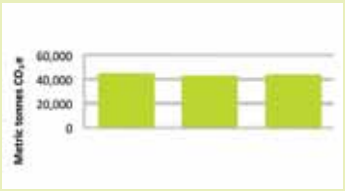
Corporate Main functions and activities include:
- corporate governance and centralised functions such as finance and treasury management, human resources management, and commercial contracting management
- estate management
- business information systems
- knowledge services, providing access to Dstl's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

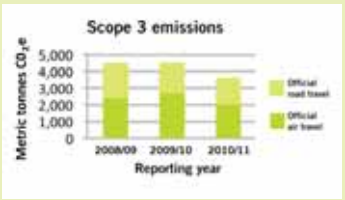
Ploughshare Innovations Limited It is government policy to transfer technical knowledge, wherever possible, to the economy for exploitation of its full commercial and social potential. Ploughshare Innovations Limited is a wholly owned subsidiary, incorporated on 6 April 2005 as a vehicle for the transfer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

Dstl Sustainability Report for 2010/11

This report is produced in line with the latest public sector reporting requirements on sustainability, as detailed in the FReM.
Dstl has made significant progress in meeting its sustainability targets in recent years, particularly in the areas of waste and energy efficiency. The organisation already exceeds key government and MOD targets in areas such as waste recycling. Dstl actively encourages sustainable working and has undertaken a range of green commuter travel initiatives. Staff also undertake various education outreach activities and contribute to corporate charitable giving – see pages 34 and 35 for further information.
Target setting and monitoring is overseen by the Dstl Sustainability Steering Group, which includes senior representatives from the relevant areas and Dstl's Sustainability Champion (who is a member of the Dstl Executive Committee). Sustainability performance reporting is also embedded in Dstl's business performance management framework and monitored on an ongoing basis. The following provides a breakdown of performance in key environmental areas.

Greenhouse gas emissions		2008/09	2009/10	2010/11	Graphical analysis
Non-financial indicators – tonnes of carbon dioxide emissions (tCO_2e)	Gross emissions for scopes 1 & 2 (energy)				
	Oil	8,763	6,431	6,680	
	Electric	25,565	26,747	26,339	
	Gas	10,022	9,392	10,587	
	Total gross emissions for scopes 1 & 2 (energy)	**44,350**	**42,570**	**43,606**	
	Gross emissions scope 3 (business travel)	4,434	4,491	3,521	
	Total gross emissions for scopes 1, 2 & 3	**48,784**	**47,061**	**47,127**	
	Net emissions for scopes 1 & 2 (energy)	44,350	42,570	43,606	
	Net emissions for scope 3 (business travel)	4,434	4,491	3,521	
	Carbon Reduction Commitment gross expenditure (2010) onwards	0	0	0	
Financial indicators (£'000)	Expenditure on energy	7,643	5,212	5,804	
	Expenditure on official business travel	8,408	7,043	5,512	
	Total expenditure on energy and business travel	**16,051**	**12,255**	**11,316**	





Targets and commentary

Dstl's Key Targets for 2010/11 included targets on reducing carbon emissions while also increasing energy efficiency – further details are given on page 11. Carbon emissions have been reduced by 20.5 per cent and energy efficiency has increased by 23.3 per cent (from a 2001/02 baseline). This has been largely due to a site rationalisation programme and improved energy monitoring and tracking, which has helped to pinpoint opportunities for efficiencies. Dstl has recently published its Carbon Reduction Strategy to help deliver further reductions. This is focused around three core activities: improved energy management, maximising site occupation and making more efficient use of buildings, and strategic investments (eg renewable energy technologies).

Direct impacts commentary

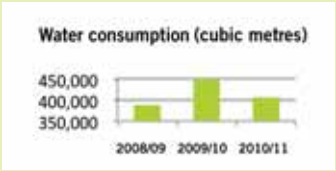
The main direct impacts for Dstl are electricity consumption and business travel. Dstl's specialist laboratory work inherently requires a certain level of electric consumption, and substantial national and international business travel is also required to support operations. The new Carbon Reduction Strategy will help Dstl to balance its business commitments while also seeking further opportunities for efficiencies. Dstl actively encourages staff to consider sustainable travel through cycle-to-work and car share schemes. State-of-the-art video conferencing is also being implemented, which will help to reduce the amount of travel for routine meetings.

Overview of direct impacts

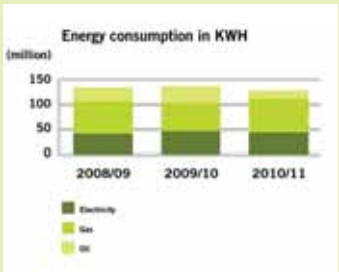
Dstl aims to reduce its reliance on electricity generated by fossil fuels and to introduce localised generation. This will support business resilience and ensure that the organisation can still continue to function if fuel shortages occur.

Waste			2008/09	2009/10	2010/11	Graphical analysis
Non-financial indicators (tonnes)	**Total waste**		**2,250**	**2,203**	**1,661**	
	Hazardous waste internal incineration (solid)		245	225	242	
	Hazardous waste internal incineration (wet)		23	47	16	
	Hazardous waste – external disposal		79	62	58	
	Hazardous waste – total		347	334	316	
	Non-hazardous waste	Landfill	328	144	109	
		Re-used/ recycled	1,466	1,516	994	
		Incinerated/ energy from waste	109	209	242	
Financial indicators (£'000)	Total disposal cost		241	270	290	
	Hazardous waste – total disposal cost		39	70	65	

Waste – Targets and commentary
Dstl is currently recycling or re-using 92 per cent of its waste arisings – significantly exceeding Dstl, MOD and wider government targets. Future increases will be challenging given the already high level of recycling/re-use, although Dstl will continue to deliver further improvements wherever possible.
Direct impacts commentary
The main direct impacts of waste relate to business outputs and, in recent years, to construction and site development activities. Dstl also produces quantities of hazardous waste that are either incinerated on site in accordance with Environment Agency approved standards or disposed of via approved external suppliers.
Overview of indirect impacts
Dstl continues to work with its strategic partner, Serco, to ensure that an efficient and effective waste disposal process is operated across its sites, based on sorting at destination rather than at source. Staff are encouraged to minimise waste wherever possible and a new waste awareness poster campaign is due to get under way shortly.

Finite resource consumption – water			2008/09	2009/10	2010/11	Graphical analysis
Non-financial indicators	Water consumption (cubic metres)	Supplied	165,373	191,543	188,184	
		Abstracted	219,665	255,540	220,000	
Financial indicators (£'000)	Water supply costs		687	755	769	

Targets and commentary
Water and sewerage services are delivered via the wider MOD Project Aquatrine contract for two of Dstl's three sites. This contract has a number of targets to reduce leaks and improve infrastructure and the achievement of these is not under the direct control of Dstl.
Direct impacts commentary
Dstl's major impact in terms of water consumption is the reliance on local abstraction at one of its sites, as governed by Environment Agency licences. Water consumption is closely monitored to ensure that current and future requirements are met.
Overview of indirect impacts
Dstl continues to work with its partners to ensure that water is used efficiently and effectively as part of ongoing operations. Staff are encouraged to report any leaks or inefficiencies in local areas.

Finite resource consumption – energy			2008/09	2009/10	2010/11	
Non-financial indicators	Energy consumption (Kilowatt hours)	Electricity – non renewable	46,995,332	49,226,919	48,418,077	
		Electricity – renewable	0	0	0	
		Gas	54,468,747	51,045,180	57,535,660	
		LPG	0	0	0	
		Oil	33,924,295	39,406,811	25,933,678	
Financial indicators (£'000)	Total energy expenditure		7,643	5,212	5,804	

Sustainable procurement commentary
In line with MOD/wider government, Dstl procures against existing Office of Government Commerce frameworks and MOD-wide agreements for the majority of its purchases – to which the organisation cannot make changes to the terms and conditions. In some cases, Dstl is limited to the use of single source suppliers and the nature of the procurement activity may not always be consistent with sustainability objectives. However, sustainability is embedded in our Dstl-generated contracts, wherever possible, and we work with suppliers to promote sustainability as appropriate. Dstl is now working towards achieving Level 3 in the Government's Flexible Framework by the end of 2012 and Level 5 by the end of 2015.

Notes:
1. The above report has been prepared in accordance with guidance laid down by HM Treasury in 'Public Sector Sustainability Reporting' published at www.financial-reporting.gov.uk
2. For 2010/11, Dstl is required to undertake dry-run sustainability reporting in advance of full disclosure and auditing in 2011/12. Therefore, please note that the data have not been audited and some estimates are included. Data capture and reporting are still being refined and improved in advance of full reporting.
3. Emissions accounting includes all Scope 1 and 2 emissions along with separately identified emissions related to official travel. Department for the Environment, Food and Rural Affairs (Defra) conversion rates have been used to account for carbon.
4. There were no changes to accounting policies or boundaries that impacted prior year, or year-on-year carbon reporting.

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