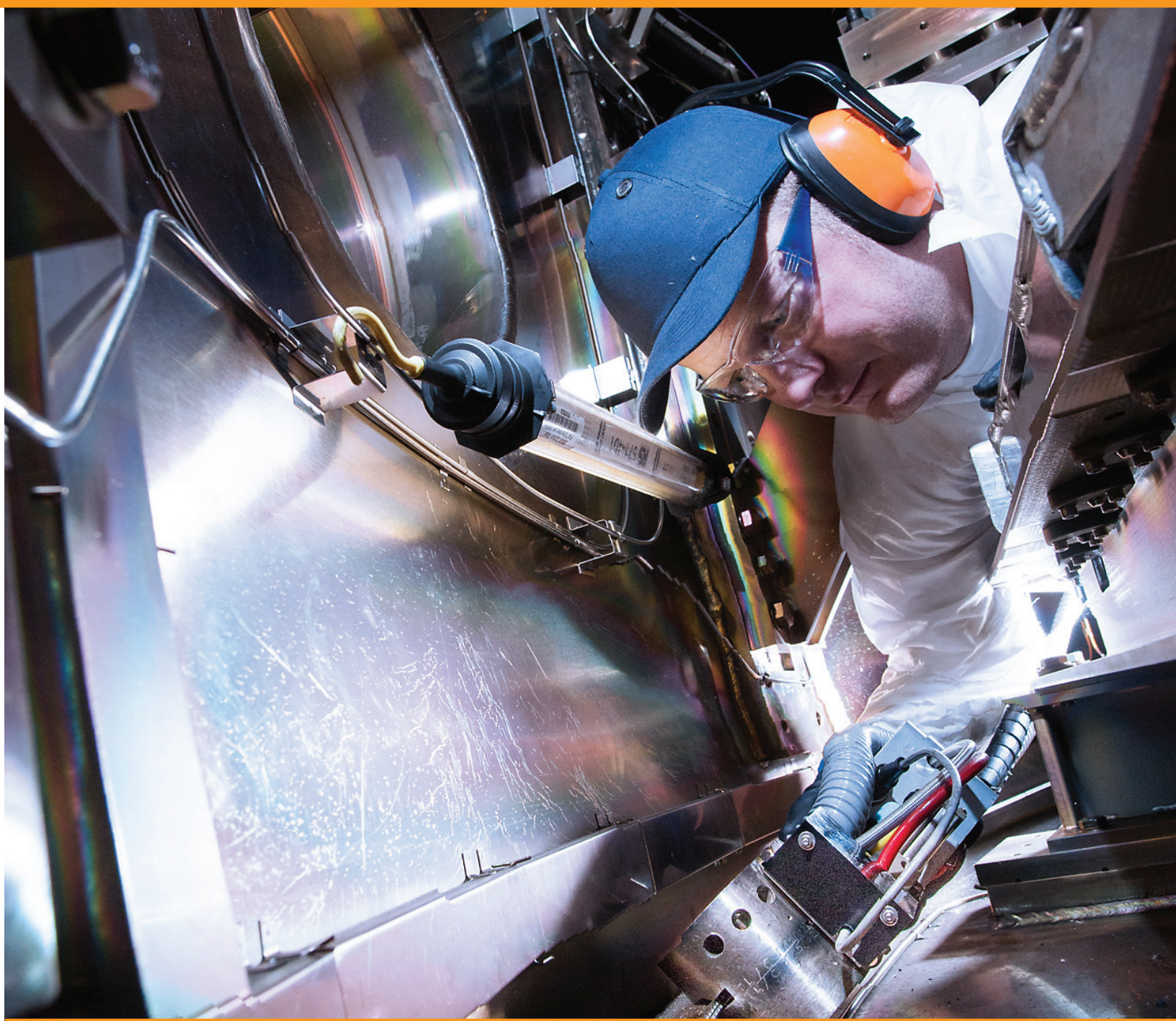




# United Kingdom Atomic Energy Authority Annual Report and Accounts 2013/14



UK Atomic  
Energy  
Authority

HC 514







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# Chairman's Statement

## Professor Roger Cashmore

During 2013/14 the Authority made major steps in our long term strategy to put the UK at the forefront of plans to deliver electricity from fusion by the middle of this century. For a number of years we have been developing plans to build new facilities on the Culham site as building blocks for future technology development and work towards a demonstration reactor. I was delighted that the first of these – the Remote Applications in Challenging Environments (RACE) facility – received significant funding as part of the Oxfordshire City Deal during the year. A team is now in place to deliver this. It joins the Materials Research Facility which will also be starting construction during 2014/15 with funding as part of the National Nuclear Users Facility.

In addition we have an increased diversity of work in areas of research related to fusion, such as advanced materials and nuclear modelling, together with the work that is ongoing at ITER. Our plans are to quadruple our modest business development activity over the next 5 years.

Work on the European JET and UK MAST facility has progressed well during the year, with a major upgrade to the MAST facility on track to be completed in 2015. The JET Operating Contract has now been extended to 2018, with plans progressing for tritium operations in 2017/18, when it will make the next significant demonstration of fusion energy generation. Both JET and MAST Upgrade will be used to test the operational scenarios for ITER and future machines, and our staff will continue to take significant roles in the European fusion programme. JET also offers the opportunity to help prepare our international partners for ITER and during the year we hosted visits from scientists and engineers from India, Russia and USA.

During the financial year, I undertook a visit to fusion institutes in China and Japan and gave a series of talks including the part that fusion and fission can play in reducing dependence on fossil fuels. I also met with the UK Energy and Climate Change Secretary, Ed Davey, in Beijing, to discuss progress in fusion, as well as discussing other areas of nuclear technology in which the UK Atomic Energy Authority has an interest.

The Board was pleased to welcome new private sector partners to help deliver the vision of Harwell Oxford as a thriving campus for technology and innovation. The development of both Harwell and Culham sites is now pushing ahead with renewed vigour.

The Board and I have been very impressed with the way in which the Culham team have responded to the additional challenges during the year at a time when financial and staffing resources are restricted. We still face a significant challenge recruiting and retaining the highly skilled staff we need to deliver our programmes of work, and the Board supports the Executive in their efforts to resolve these issues.

During the year I was pleased that BIS re-appointed the non-Executive Board members for a second term, and I am looking forward to working with them and all Authority staff during this exciting period of expansion at the Culham and Harwell sites.

Finally, I am delighted that Steve Cowley has been elected a Fellow of the Royal Society. To receive this recognition, it is not enough to be the head of a major laboratory, you need to be an outstanding scientist in your own right. We are very fortunate to have someone of such quality who is also such an excellent leader.

**Professor Roger Cashmore, CMG, FRS**  
Chairman  
27th June 2014



# Chief Executive's Statement

## Professor Steve Cowley

2013/14 has certainly been a very busy and productive year for the Authority and its fusion research activities based at the Culham Centre for Fusion Energy (CCFE). One of our core activities, operation of the Joint European Torus JET on behalf of our European fusion partners, continues to contribute to the European "Roadmap to the Realization of Fusion Energy". This is the technical roadmap for the delivery of the first (safe, efficient and carbon-free) fusion electricity by mid-century and large-scale deployment of fusion by the end of the century.

The announcement of secure funding for JET and the wider European programme for an unprecedented five years (2014–2018) offers us the chance to make ever more important contributions to ITER, the international successor to JET being constructed in Southern France by seven international partners including the European Union. Indeed, such secured funding has enabled us to formalise our plans to use the fusion fuel Tritium (in addition to Deuterium) in key experiments in 2017/18. This will allow us to push towards new record performance on JET and, just as importantly, train a new generation of scientists in running fusion devices with both fusion fuels.

Our own UK domestic programme, centred on the MAST spherical tokamak, is also at a very exciting stage. The £30 million major upgrade to MAST started in September, with the vessel removed from its machine area just before Christmas, enabling new equipment to be installed. We are currently on course to start operating MAST-Upgrade in 2015, enabling our scientists to study near fusion grade plasmas at a fraction of the size of JET. MAST Upgrade will ensure we retain a world leading tokamak experiment to 2025 and possibly beyond.

But just as important as these core activities has been the growth of our technology activities in the last year. The new Materials Research Facility (MRF) at Culham has now received planning permission and will greatly expand the work already being carried out on materials research, for fusion and fission applications. This is a key part of the National Nuclear Users Facility (NNUF), which is being developed on three locations

in conjunction with the National Nuclear Laboratory (NNL) and the Dalton Cumbria Facility of the University of Manchester. The MRF is expected to open its doors formally next year, increasing our already strong interactions with universities and other nuclear research laboratories.

It will be joined by another new facility at Culham in 2015, RACE or Remote Applications in Challenging Environments, funded by the UK Government's City Deal initiative. In partnership with leading laboratories around the UK, RACE will make our considerable expertise in remote handling techniques, including that which we have honed on JET over the last twenty years, available for industry. From deep space to the deep sea, remote manipulation is a multi-billion world-wide market. It is hoped that RACE will give UK companies a head start in exploiting this market.

This raft of technology initiatives positions the Authority to play a key role in fusion research from the science of today through the design of the demonstration fusion power station (DEMO) to full commercialisation. Our new facilities, allied to the highly skilled and committed scientists, engineers and support staff at Culham, make the future very exciting for the Authority. I am particularly gratified by the growth of non-fusion work, which is employing skills developed in fusion for the benefit of the UK economy today.

I am pleased to have two new directors in the Executive. David Martin has taken over as Operations Director; he joined the Authority initially as an apprentice and brings a strong engineering focus to my team. Catherine Pridham has taken over as Chief Financial Officer and Secretary to the Authority; she brings a wealth of commercial expertise and rigour from the private sector. I would like to thank Eric Hollis, who retires in July 2014 after over 40 years in the Authority. Finally, I thank all staff for an excellent year and I look forward to a bright and exciting future ahead.

**Professor Steve Cowley, FRS**  
Chief Executive and Accounting Officer  
27th June 2014







# Strategic Report

The United Kingdom Atomic Energy Authority (Authority) was formed in 1954 when the British Government set up a new body to oversee the nation's nuclear research programme. The organisation has restructured a number of times since then. The Authority is a non-departmental public body that reports to the Department for Business, Innovation and Skills (BIS). Its principal mission is now to position the UK as a leader in a future sustainable energy economy by advancing fusion science and technology and related technologies to the point of commercialisation.

The Authority undertakes pioneering research at its fusion laboratory, the Culham Centre for Fusion Energy (CCFE). CCFE is home to the UK's flagship fusion device MAST (Mega Amp Spherical Tokamak) and hosts the world's largest fusion facility JET (Joint European Torus) on behalf of the European Union. Both MAST and JET are developing the concept of magnetic confinement as a system for controlling fusion. CCFE's UK fusion programme work is primarily funded by the Engineering and Physical Sciences Research Council (EPSRC).

CCFE is working with other fusion laboratories to further fusion as a viable energy source. The next step is ITER, a global project being constructed in France, to prove the technical viability of tokamaks on an industrial scale. In parallel, Europe has started planning for a demonstration fusion power station, DEMO, with the goal of putting electricity on the grid by 2050's.

In November 2013, the European Parliament endorsed the seven-year 'Horizon 2020' research & development funding agreement that covers European fusion research. This gives unprecedented stability in planning future research at JET and throughout the European fusion programme. From 1 January 2014, the Authority is operating JET under a new 5-year bilateral JET Operating Contract with the European Commission. Previously this was through the European Fusion Development Agreement (EFDA).

The Authority has growing materials and technology programmes. Key aims are to progress technology issues for the next steps in fusion and to have a leading role in the integrated design of DEMO. The Authority's strong research capability in areas such as materials research, modelling & neutronics, tritium handling and robotics & remote handling are also relevant to nuclear fission and other areas. Commercial opportunities are being explored and there is a growing business development programme with increasing contracts from non-fusion sources.

In addition, the Authority is working in partnership with industry and other research institutes to take forward facilities in areas of national scientific need. In March 2013, the government announced a new multi-site National Nuclear User Facility (NNUF) with a new Materials Research Facility (MRF) at Culham with complementary facilities at National Nuclear Laboratory (NNL) and Dalton Cumbria Facility of the University of Manchester.

In January 2014, the deputy prime minister announced the Oxfordshire City Deal, which will see the UK government investing £7.8 million into a new Remote Applications in Challenging Environments facility (RACE) at Culham. This major new facility will be taken forward in collaboration with NNL, TWI, Nuclear Advanced Manufacturing Research Centre and National Physical Laboratory (NPL).

**Right** The MAST vessel is lifted into position in December 2013 to allow the rebuild to start.





# Fusion Science

CCFE is one of the world's leading centres of research in the development of nuclear fusion as a source of energy for electricity generation.

## JET

June 2013 saw the 30th anniversary of the first plasma experiment at JET, and the facility remains at the forefront of international fusion research as preparations are stepped up for ITER. Results from JET are of crucial importance in ensuring ITER's success, as they can provide predictions of performance. Tests conducted at JET between July and October 2013 focused on further exploration of how to run and optimise plasmas with the 'ITER-like' beryllium and tungsten wall. One such experiment involved deliberately melting parts of the tungsten surface to observe the effect of molten metal on the plasma's performance, and to explore the conditions for melting. Maintaining JET's high level of performance in these tests was a promising sign, and much data was yielded that will be of direct relevance to ITER operations. In November 2013, ITER opted for an inner wall made of beryllium and tungsten from the start of operations instead of a planned initial phase using carbon in the region of high heat loads; this decision was largely based on the success of JET experiments with these materials.

In October 2013 JET went into an engineering shutdown for repairs to plasma heating systems. By the end of the reporting period, the machine was being prepared for its next series of experiments, which will run through to autumn 2014.

For JET to perform the most accurate possible simulations for ITER, and to build a generation of scientists and operational staff experienced with tritium operations, a campaign of experiments using the deuterium-tritium fuel mix required for

maximum fusion power levels is planned in 2017/18. JET is the only tokamak capable of operating with tritium, but the last experiments of this type were carried out in 2003. Many systems will need to be assessed, upgraded and commissioned. In March 2014, the Authority initiated a project to prepare for the operational and technical aspects of the tritium campaign. This will be a major part of its JET operational support activities in the coming years.

## MAST

MAST operated until September 2013, allowing significant progress in plasma physics areas such as plasma impurities, control of instabilities, new start-up techniques and plasma heating studies. MAST experiments were boosted by the addition of extra diagnostic systems for measuring the plasma, such as the coherence imaging flow diagnostic with the University of Durham and the Australian National University and the ball pen probe with the University of York.

After over 30,000 experiments over more than ten years, MAST entered a shutdown period to carry out the MAST Upgrade. The £30m project involves a complete overhaul of the machine's capabilities, which will enable the UK to make important contributions to research both for ITER and DEMO. It will be the first tokamak to trial the innovative Super-X divertor, a high-power exhaust system that reduces power loads from particles leaving the plasma. MAST Upgrade, as a spherical tokamak, also offers potential for component testing.

The MAST machine was progressively stripped down before being removed by crane to the upgrade assembly area in December 2013. The rebuild phase of the project began in January 2014 and will continue until early 2015, when the tokamak will be re-installed ready for commissioning, followed by plasma operations.

## Tokamak Science Programme

The Tokamak Science programme remains focussed on delivering scientific understanding to ensure ITER meets its goals and in preparation for design of DEMO. This is achieved through experiments on MAST and JET (and increasingly ASDEX Upgrade in Germany through the new EUROfusion programme), coupled with sophisticated numerical modelling. As an example, work led by the Authority on controlling instabilities at the plasma edge in MAST by applying non-axisymmetric magnetic field perturbations from in-vessel coils has influenced the recent decision to install such coils in ITER. This involved experiments on MAST, as well as experiments led by CCFE on ASDEX Upgrade and an EU collaborative project advancing the numerical modelling, again led by CCFE.



The Tokamak Science programme works in strong collaboration with external partners, notably UK Universities and as part of the EUROfusion programme. Approximately 60% of the Authority programme in Tokamak Science is part-funded by the EU, and CCFE has a strong driving presence in most aspects of the work programme. This is particularly true in leading development of plasma scenarios in JET, which will be especially important in preparation for deuterium-tritium operation in JET, and further in the future, in ITER too.

Theory and modelling research is a key part of the tokamak science programme. This ranges from calculations of the turbulence responsible for energy losses from the plasma, through modelling of instabilities that can limit performance and damage the tokamak, to the flows in the edge region that determine the heat loads on plasma-facing components in the divertor. In February 2014, the Authority won an ITER contract to provide the LOCUST code, which is being

used to calculate the effects on alpha-particles of magnetic field perturbations deliberately applied to the edge of ITER to control Edge Localised Modes. This requires sophisticated codes run by world experts.

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Above CCFE's Luca Garzotti (right) in the JET Control Room with EFDA's Eva Belonohy.



# Fusion Technology and Business Development

The Authority's vision is to have a major energy, technology and design centre at Culham. This will provide a vibrant future for the post-JET era.

## Technology and Materials Programmes

In 2013/14, the Authority again increased its contribution to the EFDA Power Plant Physics & Technology Programme, being awarded approximately 30% of the EFDA funding available in these areas. The range of subjects contributed expanded to include balance of plant (coolants, thermodynamic cycles and their efficiency), neutron sources for materials testing and reliability studies. Supported by projects outside this framework and in collaboration with UK industry, the Authority's contribution in the first two areas influenced the EFDA programme content for 2014/15 and beyond.

The AMAZE programme was initiated last year. This is a 31 member consortium from industry, public sector and Universities to develop additive manufacturing for zero waste and high efficiency and led by European Space Agency (ESA). The Authority is working in collaboration with Birmingham and Cranfield Universities to progress the design and manufacture of high heat flux components using functionally graded metals produced via powder and wire metallurgy. This is of real interest in the divertor region of a fusion tokamak. Recent advances in material technology, of which additive manufacture is an example, have the potential to offer great benefits and are a key area for our future Technology Programme in the next five years. A network of collaborations with eight UK universities was established in 2013 through programmatic and iCASE PhD awards to enable CCFE to nurture and exploit new technology.

Construction of the MRF building will start in 2014 and the new facility will open in 2015 with hot cells for processing and analysing low-level radioactive samples for fission and fusion research. The Authority has already bought specialist analysis equipment which has been operational for non-active samples in an existing laboratory from summer 2013. Oxford and Bristol universities have used the laboratory, and analysis has also been undertaken for a local scientific company. In addition, the laboratory has been used for MAST-Upgrade and JET studies.

In another NNUF project, Advanced Digital Radiometric Instrumentation for Applied Nuclear Activities (ADRIANA), EPSRC are investing £1 million into the Authority, the University of Liverpool and Lancaster University to fund state of the art instruments. The new equipment at Culham will include ultra-sensitive gamma ray spectrometers to provide isotopic fingerprinting and accurate measurement of nuclear samples. The equipment will be made available to industrial and university researchers. The Authority will also use it for characterisation of JET waste and nuclear data measurements.

## Business Development

The Authority continues to pursue a sustainable and balanced business development programme, building on our strengths as a scientific research establishment and operator of fusion experiments. These activities are focussed on providing organisational resilience in preparation for the ultimate closure of JET and expanding the income available to grow

our technology programme. Much of the income is from commercial work in the fusion market but increasingly opportunities for using the skills developed for fusion in other markets are being exploited.

ITER is an important vehicle supporting the development of industrial capability for the supply of Fusion technology. The Authority is very active in this programme, providing specialist technical consultancy support to industry, thereby helping them to win work by filling any fusion-specific gaps in their capability. In addition to the fully funded contract work, the Authority is supporting the development of ITER systems via 40% funded grants from F4E. Grants have been awarded in areas including diagnostic systems, heating systems and plasma control systems.

In the last period the key activities have included:

- The Tritium and Waste Management business unit continuing to provide expertise to industrial partners and other research laboratories in the storage, handling and recovery of tritium from different waste streams. This included a visit to Japan to provide advice on tritium handling at Fukushima.
- The Special Techniques business unit continuing to apply novel joining solutions in the realisation of high integrity windows for fusion and other (e.g. synchrotron light sources) facilities, high performance heat exchangers and joining solutions for the medical scanner industry.



- Applied Radiation Physics providing support to ITER and Fusion for Energy (F4E) in the application of a suite of neutron transport, material activation and radiation analysis tools. These are used to support a wide range of activities including assessments of the effects of neutron damage on materials and predicting radiation dose rates during operation and maintenance activities.
- The Remote Handling group continuing to develop novel solutions with industrial partners to provide systems for maintenance and operational support for

the ITER project. Significant progress in the procurement of remote maintenance systems for ITER has been made in the period. The RACE facility will provide a basis for expanding activities in this area into non-fusion markets.

Memoranda of Understanding (MoU) have been signed with industrial partners, who are key service providers to the nuclear industry, further enabling the application of the Authority's fusion know-how into the wider commercial market place. An MoU has also been signed with NNL to explore synergies between fusion and fission know-how and

capabilities and, to look to apply them into the global nuclear energy market.

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**Above** The CCFE materials laboratory made important research contributions throughout the year.



# Property Development & Other Activities

The Authority's property strategy is clearly focussed on developing Harwell Oxford and Culham Science Centre as significant centres for science and innovation. These are already science and innovation centres of local, national and international importance. Working with partners, the Authority is continuing to strengthen their roles yet further.



The Culham Science Centre is one of the three major science and business centres that underpin Science Vale Oxford, a key engine of growth for Oxfordshire and geographic focus for the Oxfordshire Local Enterprise Partnership. It already provides employment for some 2,000 people.

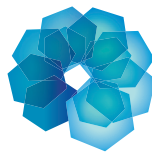
The long term strategy for Culham Science Centre is to provide the Authority with a suitable environment for its role as a key global centre for fusion technology and design, looking beyond the current focus on research and development, as well as developing Culham site to provide for a 50% growth in overall employment through attracting additional co-located business activity. Behind these headline objectives lies the challenge of addressing the building stock, some of which is now 50 years old and will require redevelopment or refurbishment.

In support of the strategy, the Authority secured three key planning permissions during the last year: Consent for the construction of the MRF building; outline consent for 9,000 sq m of new development to support the employment growth programme; and permanent planning

permission for some of the JET buildings. Furthering the planning policy for Culham Science Centre, the Authority has worked with South Oxfordshire District Council on the masterplan for the site and on a Supplementary Planning Document, public consultation on which will commence in May 2014.

A further planning application for the RACE building, consistent with the masterplan for the site, is being prepared to enable construction of this major new facility to begin in 2014.

Approximately a third of Culham's building stock is leased commercially to external companies, mainly in the science and technology sectors consistent with the strategy. Approaching 50 external businesses are located at Culham, including the start-up companies in the Culham Innovation Centre. Occupancy of the commercial property has remained high at around 90%.



**HARWELL**  
OXFORD

The Authority has worked with the Science and Technology Facilities Council (STFC) to replace the private sector partner in the joint venture Harwell Oxford formed to take forward the development of the campus. This project, which was completed on target in 2013, successfully concluded with the

private sector share of the joint venture being acquired by Harwell Oxford Developments Ltd, a new venture comprising Development Securities (Projects) Ltd, a wholly-owned subsidiary of a listed property company, and Harwell Oxford Partners LLP, a team led by Prorsus, a niche property developer. As intended, this has injected new energy into the partnership at a time of improving economic conditions, providing significant support for the science and enterprise programmes, investment in supporting infrastructure (through, for example, the Oxfordshire City Deal) and the growing space cluster at Harwell.

The new partnership has embarked on an ambitious development programme and is already in discussion with a number of prospective new occupiers. Following preparatory work on a new masterplan for the campus, the new partnership is already poised to make planning applications for a further range of new premises and facilities on the campus including an innovation centre.

Through its nominated Directors on the Boards of the joint venture and at working level, the Authority, as shareholder and majority land owner, actively supports the partnership in the development of Harwell Oxford in pursuit of the government vision for the campus.

The mobilisation of the revitalised partnership has been paralleled by the physical commencement of a range of significant new developments on the campus: These include the ESA's new European Centre for Space Applications





and Telecommunications, STFC's major new facility for RAL Space and a significant extension to Element 6's Global Innovation Centre, only a year after the opening of the first phase.

#### Other activities

The Authority is responsible for the governance and oversight of the Authority's pension schemes, which cover over 45,000 members from the civil nuclear industry. The Public Service Pensions Act 2013 will require the Authority to change the provision of pensions for future service from a final salary to a career average basis. This change will take place during the next few years.

The property programme and various legacy activities such as management of historic liabilities are funded by BIS by grant-in-aid under the Shareholder Programme Agreement.

#### Staff numbers

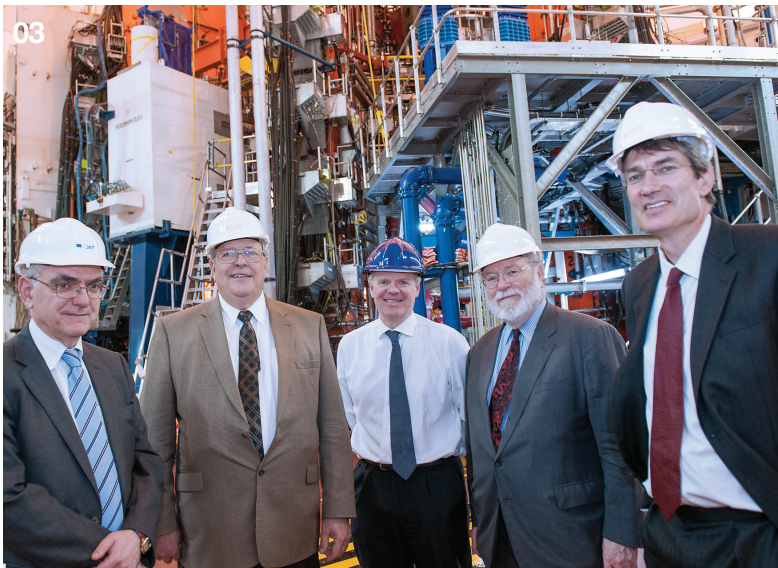
The Authority had an average of 585 full time equivalent (FTE) employees during 2013/14, compared with 537 in 2012/13. In addition, an average of 413 FTE agency workers were employed. Significant effort has gone into recruitment to fill vacancies and to position the Authority for the future.

Of the 9 Board and Executive team members one is female. There are a further five Senior Staff who are all male. Of 634 employees at 31 March 2014, 138 are female.

Above Artist's impression of the RACE building

# Stakeholder Engagement

Harnessing the power of the sun is a scientific and technical challenge. Continued support for fusion is of great importance.



1. Television presenter Richard Hammond filming at JET for a BBC documentary in July 2013.
2. Taking on the CCFE 'Pedal Power Challenge' at the ATOM Festival in Abingdon.
3. ITER Council Chair Bob Iotti paying a visit to JET in Spring 2014.
4. A PhD/Masters Open Day in December 2013 allowed prospective students to meet CCFE staff.

During the year, the Authority has sought both to keep its stakeholders informed on its activities and to maintain a dialogue on plans for the fusion programme and the future development of the Culham site. The Authority also has an industry liaison function that works closely with businesses in order to achieve the maximum benefit from fusion – and particularly the ITER project - to the UK economy.

The Authority continued actively to engage with UK MEPs and provide support to the EFDA Leader for wider engagement, stressing the importance of the European fusion programme in support of ITER.

The Authority has now completed the fourth year of the six-year £163.4m grant from EPSRC to fund the UK fusion research programme and MAST-Upgrade project. Following the mid-term review of the grant, which recommended continuation of the funding and was very positive about the quality of the science programme, the Authority is working on recommendations on further strengthening its materials and technology programmes.

### **Industry**

The landscape of the ITER site in Cadarache is changing daily as construction begins in earnest. The start of construction has also increased the Authority's engagement with industry to encourage firms to bid for the work. One example was the Monaco ITER Industry Event in December 2013, attended by six UK companies supported by the Authority's Chairman and Fusion & Industry Manager, and by UK Trade & Investment.

UK businesses have continued to win ITER work packages, with the total value of contracts now exceeding €250M. Some of these companies include: Assystem, Atkins Global, Jacobs, Ridgeway Engineering, Frazer Nash and Arcadis. More are needed, especially to manufacture the

more challenging components for ITER, and Culham's industry programme will be central to increasing British involvement in the project.

### **Outreach and public engagement**

The Authority runs an active education programme, involving many staff volunteers, to promote careers in physics or engineering to young people. More generally it works to raise the profile of fusion and the research at CCFE, both in targeted interest groups and among the public as a whole.

During 2013/14 there were 156 visits involving well over 2,000 visitors, including politicians, industry, the research community, schools, universities and professional societies. There were ten Open Evenings for the general public, each of them fully booked months in advance. In addition, an extra weekend Open Day was held in November 2013. The afternoon of this event was reserved for people from the local community to view the facilities, and the morning was for those who had not been able to book a place for a standard Open Evening.

Staff also undertook outreach activities at many off-site events. For example, CCFE was closely involved in organising the Oxfordshire Science Festival and the first ever Abingdon Science Festival 'ATOM', and participated in a number of events during both.

Promotion of CCFE activities through the media continued – highlights included a BBC1 news report on JET and ITER, an appearance on a primetime BBC TV documentary presented by Richard Hammond, and national press coverage in four countries following a media event for JET's 30th Anniversary co-organised with EFDA.

CCFE further developed its use of social media in 2013/14; in particular, it held two successful Twitter live Q&A sessions that allowed members of the public to tweet fusion scientists and engineers with their questions about their work.

20 requests for information were received in 2013/14 and treated under the Freedom of Information Act regime. All were completed within the 20-day limit.

### **University Collaborations**

Universities make many contributions across the whole spectrum of CCFE's research programme; in plasma physics and instrumentation, materials science, nuclear data and neutronics, and fusion technology. There are links with over 20 universities, most involving PhD students, of which there are over 40. Many of these students are part of the EPSRC-funded Fusion Centre for Doctoral Training, which was renewed during the year; this is led by the University of York and also involves Durham, Liverpool, Manchester and Oxford (CCFE also has students at the Imperial College CDT on materials theory). As well as student research, several university academics have fusion as part of their research activities, most notably at York and Warwick (plasmas) and Oxford (plasmas and materials). In fusion technology, a new professor will start at Sheffield towards the end of 2014.

# Key Performance Measures

The JET milestones and fusion programme milestones represent the core of scientific research and were agreed with EFDA and EPSRC, respectively. Both threshold targets were exceeded, demonstrating good performance of the scientific programmes.

Half of the MAST-Upgrade milestones were achieved on time. This is a major project and during the year design complications and manufacturing issues delayed delivery of a number of milestones. The project is still due for completion in 2015.

The Authority takes a balanced scorecard type approach to the other performance measures to help drive improvements in the other business activities and in support areas. This included a new measure on delivery of internal audit recommendations, for which there was excellent performance.

The budgetary target for business development income was met and the target for commercial property exceeded. The Business development target for 2014/15 has been increased in line with aims to grow this area.

There has been excellent performance on the Key Process and Cultural Measures. Two measures were set on recruitment as this continues to be one of the Authority's key risk areas. Proactive recruitment and improvement of processes has resulted in excellent performance in this area.

In addition, each performance measure had a stretch target. Ten of the twelve measures met at least part of the stretch target.

Performance Measures	Target	Provisional Outturn
<b>Key Scientific Measures</b>		
Achieve the performance milestone targets for JET Operations agreed with EFDA for 2013/14	75%	13 out of 16 JET milestones (81%) were delivered on time
Achieve the Fusion Programme milestones agreed with EPSRC for 2013/14	80%	39 out of 46 milestones (85%) were delivered on time
Achieve the milestones for the 2013-14 MAST-Upgrade project	80%	9 out of 18 (50%) milestones were delivered on time
<b>Key Business and Financial Measures</b>		
Achieve the milestone dates for 2013/14 embedded in the long term CCFE strategy implementation programme	80%	14 out of 16 milestones (87.5%) were delivered on time
Achieve the external business development revenue targets across the full scope of business development activities, including 100% ITER-funded opportunities	Budget figure	Budget target achieved
Achieve the operating profit targets from Authority commercial property management	Budget figure	Budget target exceeded
Achieve the Authority's Internal Audit actions	100% red, 80% amber & 50% of green actions	17/17 (100%) red, 33/34 amber (97%) & 37/39 green (95%) audit actions were achieved on time
<b>Key Process and Cultural Measures</b>		
Achieve the milestone dates in the 2013/14 Continuous Improvement Programme	80%	100% were delivered on time
Reduce the number of vacancies in the Authority by recruiting into positions that are/become vacant due to retention issues	20% reduction	43% reduction achieved
Reduce average time taken to recruit to all vacancies	20% reduction	27% reduction achieved
Eligible staff have agreed Objectives and Personal Development Plan, a completed Performance Review and confirmed Performance Rating by 31 October 2013	80%	99.5% achieved
Achieve the milestone dates in the 2013/14 Safety, Health and Environment Programme	80%	17 out of 20 milestones (85%) were delivered on time

# Principal Risks



The principal risks to the Authority remain security of adequate funding and having the right skills and people in place to deliver the vision.

The Authority continues to work hard to engage with policy makers and influencers to retain support for fusion. Horizon 2020 is being finalised, reflecting the strong support for continued operations of JET throughout the framework period. Once finalised this should provide a period of relative stability. However, the transition to the new European funding arrangements is proving challenging in the short term and the Authority is working hard to manage cash flows during this period of turbulence. Work continues to identify and secure other sources of income and form collaborations with external organisations to provide the Authority with more resilience.

The combination of continuing government austerity measures and national shortages in areas such as engineering has continued to impact on the Authority's ability to retain and attract experienced staff. Furthermore, as the Authority continues to bid successfully for externally funded contracts and develop centres of technical excellence, the requirement for specialist expertise is increasing. Recruitment campaigns have taken place and a new e-recruitment system has been implemented to streamline the recruitment process. However, recruitment and retention of the right calibre of staff remains very challenging. Longer term mitigation includes continuing in-house development of talent.

Safeguarding the health and safety of the public, employees and contractors and protecting the environment are key values to the Authority. Although the risk of a major incident continues to be low this is taken very seriously. Robust safety measures and systems are in place and safety and environmental performance continues to be high.

A project to move the finance and HR administrative processes from SAP to the Oracle platform, managed by UK Shared Business Services Ltd, is now underway. Risks associated with this transition are being closely monitored.

**Above** A worker inspecting the entry to the JET vessel during preparations for the 2013 campaign of experiments.

# Financial Review

## Key figures

### Revaluation credit

One of the key figures in this year's accounts is a credit to the income statement of £8,187k relating to an increase in value of the Authority's investment properties following their annual revaluation (see note 13). £7,520k of this credit related to Harwell and £667k to Culham. The increase in values at Harwell was mainly due to the revaluation of land under the terms of the new Partnership Agreement following the recent change of private sector partner. The smaller increase at Culham was mainly due to the improved rental market. The revaluation credit is the main reason for the profit shown in the Accounts (see further analysis of operating performance below).

### Nuclear Liabilities Estimate

The estimated cost of decommissioning and environmentally restoring the JET facilities at the Authority's Culham site is £241,876k, in 2013/14 money values and discounted at rates advised by HM Treasury to the date of the Statement of Financial Position. It is expected that the part of the Culham site on which the JET facilities are located will be designated to the Nuclear Decommissioning Authority (NDA) after the current research programme has ended and the liabilities will be transferred to NDA at that time. Various uncertainties affect the estimated decommissioning cost. The effect of certain key factors on the estimate has been disclosed in Note 21a.

## Operating performance

Revenue for the year was £99,062k (2013-£95,028k). This increase was mainly due to higher expenditure on the main EPSRC programme than in the previous year. The Group made an operating profit of £8,511k (2013-£856k). This increase was mainly due to the effect of the revaluation credit of £8,187k noted above. The retained profit for the year after financing but before income tax was £8,479k, compared with £958k in 2013, again mainly owing to the effect of the revaluation credit. Profit for the year after taxation was £7,681k compared with £2,733k in 2013.

## Basis of preparation of the accounts

The financial statements comply with the provisions of the Atomic Energy Authority Act 1954 and the Accounts Direction issued by HM Treasury. Further detail is provided in Note 2 to the Financial Statements.

## Going concern

The financial statements have been prepared on a going concern basis. The Directors believe that the commitment of Europe to fusion research evidenced by the new five year contract between the Authority and the Commission for the operation of JET, and the acceptance by BIS of responsibility for costs associated with Authority site restoration and restructuring liabilities, are sufficient to support continuing operations for the foreseeable future. More details are given in Note 2 to the Financial Statements.

## Other financial information

### Taxation

The Statement of Comprehensive Income shows an income tax debit of £798k (2013- credit of £1,775k). This relates entirely to deferred taxation.

### Current Taxation

No current taxation was due in the year. The Authority continues to submit claims for research and development tax relief annually to HM Revenue and Customs, and these offset non-trading profits from property and other activities.

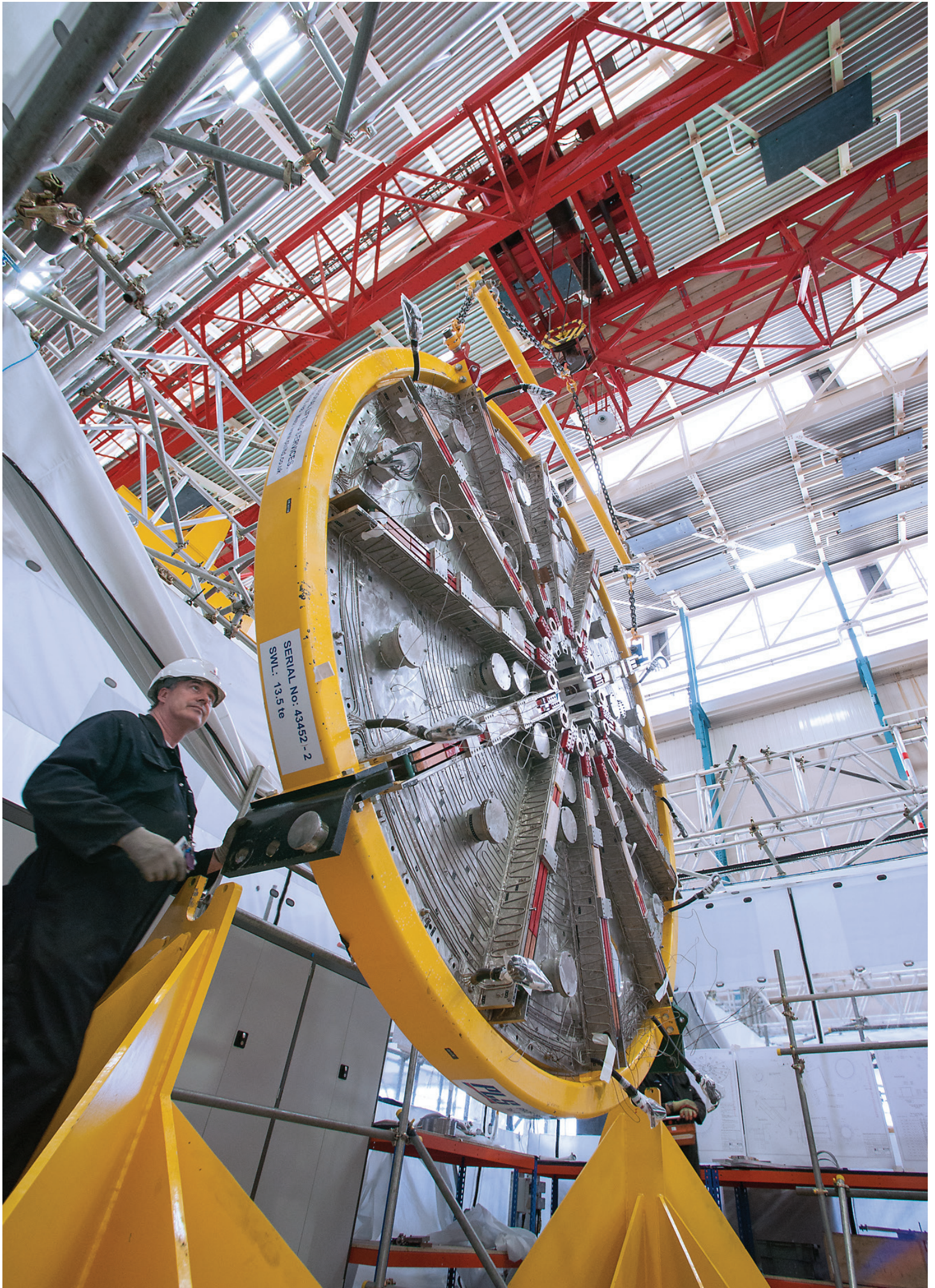
### Deferred Taxation

A debit of £1,883k arising from the revaluation credit on investment property mentioned above was partially offset by a credit of £1,085k relating to the change to a 20% tax rate for the carried forward deferred taxation provision.

### Insurance

During 2013/14, the Authority insured most non-nuclear risks through its wholly-owned subsidiary, AEA Insurance Ltd (AEAIL). AEAIL also covers some nuclear risks, but in the main where necessary these continue to be covered by the UK Government under the Nuclear Installations Act 1965. The Authority will continue to cover most of its remaining insurance requirements through AEAIL.

**Right** An end plate is lifted during MAST-Upgrade work in March 2014.



# Sustainability Report

The Authority reports quarterly against the Greening Government Commitments scheme, but an exemption has been granted from the scheme's reduction targets, due to the nature of the energy research carried out at Culham.

## Summary Data

Table 1: Summary of financial and non-financial information for 2013/14

Area	2011/12	2012/13	2013/14	
Greenhouse gas emissions (Scopes 1-3 excluding international air travel) (CO <sub>2</sub> (e) '000 Tonnes)	86.8	40.6	60.8	
Estate Energy	Consumption (mill kWh)	66.4	54.4	67.1
	Expenditure (£k)	4,813	4,333	5,626
Estate Waste	Amount (tonnes)	795.5	857.7	802.1
	Expenditure (£k)	416	344	219
Estate Water	Consumption ('000 m <sup>3</sup> )	83.2	69.4	99.8
	Expenditure (£k)	205	162	216

For more detail (figures and discussion), please see Tables 2-4.

Existing biodiversity areas, established under the Authority's Biodiversity Action Plan, are maintained in a way that encourages the natural development of these areas. Ideas to further encourage biodiversity are built into the grounds maintenance plan after liaison with onsite experts.

Sustainable Procurement standards are incorporated into Pre-Qualification Questionnaires and Tender Documents as standard Authority practice and are applied in a range of areas as new or re-tender procurement exercises arise. Improving sustainability through the re-tender of a waste contract in 2013/14 demonstrates the value of these standards. The Authority catering contractor sources the best quality food, ideally from UK markets, which has been produced with animal welfare, safe harvesting standards and sustainability in mind. The Authority supports sustainable construction, although no new builds took place on site during 2013/14.

### Data Collection

Electricity and water use, fugitive emissions, waste production and staff numbers vary depending upon whether the JET and MAST machines are operating. During operations,

fugitive emissions and electricity and water use increase. When the machines are not operating (shutdowns) waste production and staff numbers increase. Given this background, it is difficult to identify a suitable consistent factor considered appropriate to aid comparability between years. Whilst there is a good correlation between gas consumption (mainly used for heating) and outside temperature, there is only very weak correlation with electricity usage. There is a better correlation between operational electricity use and the number of pulses for the JET machine. The intention is to exploit this in improved energy analysis in the coming year. In office based areas, electricity consumption can be normalised by floor area.

### Scope 1 emissions

During machine operations much of the high voltage equipment is filled with sulphur hexafluoride (SF<sub>6</sub>), a very powerful greenhouse gas, and fugitive emissions (Scope 1) form a major part of the Authority carbon footprint. High voltage equipment is emptied of SF<sub>6</sub> for the duration of machine shutdowns, and SF<sub>6</sub> emissions are therefore zero during these periods. Machine shutdowns took place for shorter

periods throughout 2013/14 compared to the previous financial year and so SF<sub>6</sub> use is higher. Data collection of SF<sub>6</sub> usage is now regular procedure in the areas of use and the data is being widely used as an operational indicator as well as for carbon footprinting purposes, which is collated and reported quarterly. The first full year of data recording was 2012/13 and prior to January 2012, no quantitative SF<sub>6</sub> use data was available. However, the operational schedule of the machine makes comparison between financial years difficult.

Action taken during 2013/14 has reduced the leak rate, and therefore use, of SF<sub>6</sub> from identified equipment. Further extensive actions are planned for the shutdown period in 2014/15 which will be fully realised during the next operational period in 2015.

Gas use (Scope 1), for heating and catering purposes, is regularly monitored and reported internally.

Vehicles owned by the Authority are also classified within Scope 1 emissions. Mileage logged by the limited number of owned vehicles is recorded and reported



Table 2

Greenhouse gas emissions		2011/12	2012/13	2013/14
Non-financial indicators (1,000 tCO <sub>2</sub> e)	Total emissions (Scope 1-3)	86.84	40.56	60.76
	Total net emissions	86.84	40.56	60.76
	Gross emissions Scope 1 (direct)	50.91	18.19	32.84
	Gross emissions Scope 2 & 3 (indirect)	35.93	22.37	27.92
Related energy consumption (million kWh)	Electricity: Non-Renewable	56.09	39.81	53.69
	Electricity: Renewable	0.00	0.00	0.00
	Gas	10.27	14.56	13.38
	LPG	0.00	0.00	0.00
	Other	0.00	0.00	0.00
Financial indicators (£k)	Expenditure on Energy	4,817	4,333	5,626
	CRC Licence expenditure	426	426	409
	Expenditure on accredited offsets	–	–	–
	Expenditure on official business travel	322	375	463

### Performance Commentary - Planned improvements

Electricity consumption and release of fugitive emissions are the Authority's most significant environmental impacts. Longer operational periods than the previous year have resulted in an increase in electricity consumption. Progress in reducing these impacts during 2013/14 has included efficient lighting replacements and a programme of SF<sub>6</sub> leak detection and analysis. Reduction of electricity use and SF<sub>6</sub> emissions have been priorities for the Authority's Improvement Programmes for the last few years, where possible around scientific programme demands, and will continue to be in 2014/15. The increase in expenditure on official business travel was mainly on air travel relating to the Authority's business activities in Europe.

### Controllable Impacts

Major direct, controllable impacts are the fugitive emission of SF<sub>6</sub> and electricity use (particularly during quarters where the machines are being operated).

### Influenced Impacts

The Authority is in a position to influence the method of commuting that staff choose. As well as the actions detailed above, a representative from the Authority takes part in negotiations with local public transport providers, with the aim of improving public transport to and from the site.

quarterly. This is included in the total Scope 1 emissions for completeness despite not having a significant bearing on the total.

### Scope 2 and 3 emissions

Electricity (Scope 2) and business travel and commuting mileage (Scope 3) is routinely collected and reported internally.

The Culham site is located in rural South Oxfordshire and the options for public transport are limited. However, environmentally friendly methods of commuting are encouraged where possible. The Culham Traffic Count is conducted annually in September to provide data on the modes of transport chosen for commuting. The 2013/14 survey results largely repeated the previous year showing maintenance of the percentage of car drivers below 80% and an increase in train use and cycling.

The Culham Traffic Count surveys provide the basis for calculating emissions from commuting for internal reporting. The Authority promotes the use of sustainable transport for commuting through the Cycle to Work scheme (including an annual Cycle to Work day) and operating the Culham CarShare lift-sharing scheme, which received the highest number of registrations in National Liftshare week in October 2013 since the scheme began.

### Waste production

Controlled and hazardous waste data has been collected and reported quarterly during 2013/14. The provision of appropriate data as a requirement in waste management company contracts is now standard procedure. Progress has been made in reducing waste to landfill due to a change in waste contract in July 2013 whereby general

office waste is now sent to an Energy from Waste facility. The major upgrade of the MAST machine led to specialist items of hazardous waste being disposed of in 2013/14 which increased the cost despite volumes being comparatively low.

Radioactive and Out of Scope of Regulations (OSR) waste are also included for completeness. OSR waste constitutes material where the activity is low enough to fall below the threshold set by the Environmental Permitting Regulations to be classified as radioactive waste. An amendment to the regulations in 2012 introduced a hazard based isotope specific threshold therefore allowing some waste previously deemed as radioactive to be disposed of as OSR waste. Produced Radioactive and OSR waste has seen a large increase during the period due to a

# Sustainability Report continued

Table 3

Waste		2011/12	2012/13	2013/14	
Non-financial indicators (tonnes)	Total waste disposed of	795.54	857.67	802.06	
	Hazardous waste	Total	67.66	122.31	37.27
	Non-hazardous waste	Landfill	165.25	161.05	149.32
		Reused/Recycled	513.85	511.49	470.09
		Composted	27.04	24.96	24.96
		Incinerated (energy recovery)	0.00	0.00	95.24
		Incinerated (no energy recovery)	0.01	0.05	0
		Total non-hazardous waste	706.15	697.55	739.61
	Radioactive	Produced	44.59	20.59	129.48
		Disposed	21.73	19.13	19.07
	OSR	Produced	0.98	1.59	28.77
Incinerated (no energy recovery)		0.00	18.69	6.11	
Total Radioactive / OSR waste disposed of		21.73	37.82	25.18	
Financial Indicators (£k)	Total disposal cost	416	344	219	
	Hazardous waste disposal cost	No data	7	27	
	Non-hazardous waste disposal costs	Landfill	No data	29	33
		Reused/recycled	No data	-5	-72
		Composted	No data	1	1
		Incinerated (energy recovery)	No data	0	14
		Incinerated (no energy recovery)	No data	0	0
	Radioactive	Disposed	317.15	271	209
OSR	Incinerated (no energy recovery)	0	41	7	

Figures for production of radioactive and OSR waste are included for information and do not form part of the waste disposal total; these have seen a large increase during the period due to a site wide effort to reduce radioactive spares. The figure for 'Compost' is food waste sent for anaerobic digestion. Negative financial figures for 'Reused/Recycled' reflect rebates received from scrap metals.

## Performance Commentary - Planned improvements

The aim of meeting reporting requirements for waste data collection has been met. Progress is now to be made in reducing waste produced and improving reuse and recycling to reduce the environmental impact of disposal.

## Controllable Impacts

Direct impacts result from Authority waste disposal. Authority staff are instructed to reuse items to minimise waste sent for disposal and to segregate waste appropriately to allow for easier recycling.

## Influenced Impacts

The Authority is able to exert influence on tenants on the Culham site; compliance with all relevant waste management and environmental permitting legislation is written into leases.

site wide effort to reduce radioactive spares. Although Incinerated OSR has decreased from the previous reporting period, a large mass of non-incinerable OSR has been disposed of. Good progress has been made in 2013/14 with the processing and disposal of waste liabilities and significant investment has been made with the construction of a

'Bulk Suited Facility' to enhance radioactive waste processing capability.

## Finite resource consumption Water use

Water use data is routinely collected and reported internally, and measured data is available for the reporting period.

## Paper use

Office paper use data is routinely collected and reported internally, and measured data is available for the reporting period. Paper use during 2013/14 remains relatively static from the previous year when significant reductions had been made.

### Future environmental plans

The Authority will continue to run an Environmental Management System certificated to ISO14001. This includes a Safety, Health and Environment Policy approved by Senior Management and communicated to staff, contractors and the public. A register of environmental aspects and impacts arising from activities onsite is established and used to determine the Safety, Health and Environment targets made in the annual Improvement Programme. This is created in preparation

of the beginning of the financial year and delivered over the following 12 months. Successful improvements made in 2013/14 through the Improvement Programme include reductions in paper waste from bathroom areas and lighting replacements within certain buildings that have saved over 40% on running costs and 15,400kg CO<sub>2</sub>e per year. These positive actions will be built upon in the 2014/15 Improvement Programme.

The Authority's future strategy is to continue to reduce emissions of SF<sub>6</sub> both by further short term improvements in equipment and operational procedures, and by investigations to identify a long term solution. Continual improvement of environmental performance is essential but it is imperative to know where resources need to be targeted. The aim for 2014/15 is therefore to establish priority areas and action plans for future improvements as well as to reduce consumption of paper and electricity from previously identified actions.

Table 4

Finite resource consumption		2011/12	2012/13	2013/14	
Non-financial indicators ('000m <sup>3</sup> )	Water consumption (whole site)	Supplied	83.22	69.38	99.77
		Abstracted	N/A	N/A	N/A
		Supply per FTE	0.09	0.08	0.10
	Average number FTE staff/contractors	937	907	998	
	A4 paper reams equivalent	9,000	6,000	5,800	
Financial indicators (£k)	Water supply costs (whole site)	205	162	216	
	Paper supply cost	16	10	13	

### Performance Commentary - Planned improvements

There is an ongoing process of identifying and fixing leaking pipes onsite. The Trade Effluent processing facility has taken action to reduce water used in dilution and in three months has estimated to save 4,800m<sup>3</sup>. However, water consumption across the site increased in 2013/14 due to increased operational periods of the JET machine. Further practices will be examined in 2014/15 to identify savings. Paper use cost more during 2013/14 compared to the previous year despite consumption decreasing due to the greater proportion of A3 (as opposed to A4) used.

### Controllable Impacts

Major direct users of water onsite are the site cooling water facility and the trade effluent treatment plant. Work is currently underway to reduce water use by both plants.

Staff are encouraged to reduce paper use by using double-sided printing when printing is necessary and printing across site is monitored using print audit software to make decisions on where print machines can be rationalised.

### Influenced Impacts

The Authority does not currently have any indirect influences on water or paper consumption.

### Notes

- The report above has been prepared in accordance with guidelines laid down by HM Treasury in 'Public Sector Sustainability Reporting' published at [www.financial-reporting.gov.uk](http://www.financial-reporting.gov.uk).
- The greenhouse gas emissions were calculated (from the raw data) using DEFRA/DECC conversion factors (<http://www.ukconversionfactorscarbonsmart.co.uk/>)
- Figures which have been partially or entirely estimated or revised in tables 1-4 are in bold italics. Explanations of each estimate follow:
  - CRC Licence Expenditure - The 2012/13 figure has been revised to show actual expenditure in year.
  - Waste figures - Hazardous, composted and recycling financial and non-financial data has been partially estimated

### Professor Steve Cowley, FRS

Chief Executive and Accounting Officer  
27th June 2014



# Directors' Report

## United Kingdom Atomic Energy Authority Board

The Directors of the Board, and where appropriate the period for which they served during the year, are set out below.

### Chairman

Professor Roger Cashmore, CMG, FRS

### Executive Directors

Professor Steve Cowley FRS, Chief Executive Officer (CEO)

Martin Cox, Director of Strategy and Technology (to 31st October 2013)

### Non-Executive Directors

Professor Sir Keith Burnett, CBE, FRS

Peter Jones, FCCA

Steve McQuillan

### Authority Secretary

Eric Hollis (to 31st December 2013)

Catherine Pridham, ACA (from 1st January 2014)

Biographical details of the Directors are included on pages 25 to 27. The responsibilities of the Directors are included on page 28.

## The Executive Committee

Professor Steve Cowley, Chief Executive Officer (CEO)

Martin Cox, Director of Strategy & Technology

Eric Hollis, Chief Financial Officer and Authority Secretary to 31st December 2013 - remained an Executive Committee member throughout the year

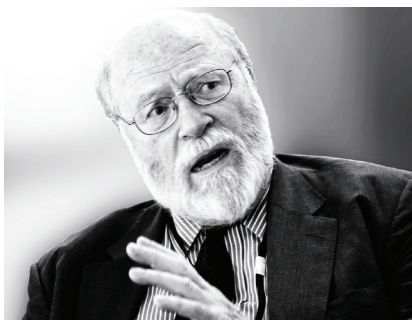
David Martin, Operations Director

Catherine Pridham, Chief Financial Officer and Authority Secretary from 1st January 2014 - Executive Committee member throughout the year.

Biographical details of the Executive Committee are included on pages 26 to 27. Their remuneration has been included in the Remuneration Report.

# Chairman and Non-Executives

1



## 1 Professor Roger Cashmore, CMG, FRS

Appointed Chairman of the UK Atomic Energy Authority on 30 July 2010. He is a Fellow of the Royal Society and in 2010 led the Royal Society working group on Nuclear Proliferation. He is a former Principal of Brasenose College in Oxford, and is a Professor of Experimental Physics in Oxford. Before returning to Oxford, he was Director of Research and Deputy Director General of CERN, the European high energy physics laboratory in Geneva, Switzerland, where he was responsible for the experimental programme at the Large Hadron Collider. Before leaving for CERN he was Chairman of Physics in Oxford and during his teaching and research career he has more than 200 publications in learned journals. He has been a Visiting Professor in Tsukuba in Japan, Brussels, Padua, Fermilab in the United States and holds an Honorary Doctorate from the Joint Institute of Nuclear Research in Dubna, Russia. He was awarded the C V Boys Prize of the Institute of Physics and a Research Award by the Alexander von Humboldt Foundation in Germany. In 2004 he was made a Companion of the Order of St Michael and St George (CMG) for services to international particle physics.

## 2 Professor Sir Keith Burnett, CBE, FRS

Appointed to the Authority Board on 1 November 2010. He became Vice-Chancellor of the University of Sheffield in 2007. Previously he was Head of the Division of Mathematical, Physical and Life Sciences at the University of Oxford. Before this he was Chairman of the Physics department at Oxford.

His research is in the area of ultra-cold atomic physics. His direct involvement in fusion science policy started when he was head of Physics at Oxford and chaired the

2



review of fusion science for the DTI. This report led to the Engineering and Physical Sciences Research Council (EPSRC) taking up the funding role for the UK effort in fusion research. He was from 2001 to 2007 Chair of the Fusion Advisory Board which advised EPSRC, and hence the Authority, on fusion strategy. He later chaired the expert group that helped develop the Research Councils UK Fusion strategy, and had the opportunity to assess the UK's programme for the years ahead.

Keith is a member of the Prime Minister's Council for Science and Technology. He was knighted for services to science and Higher Education in 2013.

## 3 Peter Jones, FCCA

Appointed to the Authority Board on 1 November 2010. He became a non-executive director of National Nuclear Laboratory Limited and Chairman of its Audit Committee in August 2009. He is an Associate of Frontier Economics Limited providing advice in relation to possible mergers in the healthcare sector. He was a Reporting Panel Member of the Competition Commission from 2005 to 2013. His previous roles have included: Principal Private Secretary to the Chairman of the National Coal Board, and during a subsequent 19 year career in Corporate Finance at Samuel Montagu & Co. Limited and HSBC Investment Banking, as a senior adviser to the Department of Trade and Industry during the 2003-4 strategic review of BNFL, as a senior adviser to Scottish Power and British Coal during their respective restructurings and privatisations and to British Nuclear Fuels Ltd during the implementation of the strategic review and also as a consultant to the Shareholder Executive and Department of Trade and Industry during the final

3



4



preparations for the restructuring of the civil nuclear clean-up sector in 2004-2005.

Peter is also a qualified Chartered Certified Accountant and has had exposure to a wide range of financial management and planning issues in a variety of sectors varying from financial services to electricity production.

## 4 Steve McQuillan

Appointed to the Authority Board in November 2010. He is currently the CEO of the listed UK Engineering group, Avingtrans plc. He also has advisory board roles in Engineering UK and the EEF. A graduate electronics engineer, he started his career in the oil industry, working for American Oil giant Conoco in the North Sea. He was part of the team that sold Marconi Instruments to IFR, Inc. Recent positions include Managing Director of Oxford Instruments Superconductivity Division, Director of the National Physical Laboratory and Managing Director of the Serco Defence Operations business.

Steve is a Fellow of the Institute of Physics and a Fellow of the Institute of Directors

# Executive Team

1



## 1 Professor Steve Cowley, FRS

Joined the Authority in September 2008 as Director of Culham and was appointed to the Board as Chief Executive Officer and Accounting Officer for the Authority on 31 October 2009. He is part time Professor at Imperial College London and is Chair of Princeton's Plasma Physics Laboratory Science Advisory Committee. He is also a member of the Prime Minister's Council for Science and Technology and is on Kings College London's science advisory board.

A qualified physicist and Fellow of the American Physical Society and the Institute of Physics, Professor Cowley started his career at Princeton University in 1987 following his post-doctoral work at Culham. In 1993, he joined University of California, Los Angeles (UCLA) and became a Professor in 2000. From 2001, he led the plasma physics group at Imperial College, London for three years. In 2004, he was appointed Director of the Centre for Multi-scale Plasma Dynamics at UCLA and held this position before joining the UK Atomic Energy Authority in 2008. He recently co-chaired the US National Academy's decadal assessment of, and outlook for plasma science. He has published over 120 papers and articles covering theory of fusion plasmas, the origin of magnetic fields in the universe, the theory of plasma turbulence and explosive behaviour in both laboratory and astrophysical plasmas. In 2012, he was awarded the Glazebrook Medal from the Institute of Physics. He was elected a Fellow of the Royal Society in 2014.

2



## 2 Martin Cox

Appointed to the Authority Board as Chief Operating Officer on 1 November 2010. He was responsible for the day-to-day running of the UK's fusion research programme, and for the operation of JET on behalf of EURATOM and fusion laboratories across Europe. In May 2013 he was appointed Director of Strategy & Technology with responsibility for development of the strategy for increasing the technology activities at Culham as fusion research moves progressively towards energy production, including maximising our roles in ITER and the design of the DEMO fusion reactor. He is also responsible for our overall business development and major projects including the MAST Upgrade. He also has a key role regarding the contract with the EU Commission to operate JET on behalf of Europe.

Martin is a theoretical physicist who joined Culham upon graduating, working on plasma modelling. He then became involved in the operation of the experimental facilities. In 1994 he was appointed the Project Manager for the design and construction of the MAST device. From 2000, when the Authority assumed responsibility for the operation of JET on behalf of the European fusion community, he became manager of the Machine Operations Department, overseeing the operation of most of the JET facilities as well as MAST. In 2007 he was appointed Senior Manager for all aspects of JET operation and in 2008 was appointed Assistant Director (Operations). He was appointed Operations Director on 1 November 2009.

3



## 3 Eric Hollis

Has over 40 years' experience within the Authority. He began his career working at the London HQ on energy forecasting and has since undertaken a wide range of roles including development and application of HR policy at both HQ and site levels before becoming Head of the Authority's Finance Branch in 1986. After a number of finance-related roles, he was appointed the Head of Corporate Finance for the Authority Group in 2003, and acted as UKAEA Ltd's Group Financial Controller from its creation in 2008. He has been on the Board of AEA Insurance Ltd since 1997, and on the Board of the Harwell Science and Innovation Campus Joint Venture since 2010. He has been heavily involved in a number of major organisational restructuring projects, and has played a key role in the development of corporate governance and financial strategy as the Authority has evolved. He was appointed Chief Finance Officer and Authority Secretary for the UK Atomic Energy Authority on 1 November 2009, and Director, Support Division in 2011.

4



#### 4 Catherine Pridham, ACA

Appointed as Head of Finance, Contracts and Integrated Planning in 2012 and became Chief Financial Officer, Director of Support Division and Secretary of the United Kingdom Atomic Energy Authority in January 2014. She qualified as a chartered accountant with Arthur Andersen and has worked in the pharmaceutical sector for SmithKline Beecham, Amersham plc and GE Healthcare, where she supported a number of different business areas including a commercial clinical trials business, a large R&D portfolio and a Joint Venture looking to exploit research capabilities commercially with large pharmaceutical companies. Prior to joining the Authority she completed several finance restructuring and process improvement projects for the Ministry of Justice and Department of Transport.

5



#### 5 David Martin

Appointed Operations Director in May 2013, having previously been responsible for the Operations and Programme Delivery Division. He is a Chartered Mechanical Engineer and Fellow of the Institution of Mechanical Engineers who joined Culham after completing an apprenticeship at Harwell in 1979. Following a role in the build and operation of the Neutral Beam Testbed on JET, he joined the Engineering Group in Neutral Beams before establishing the Engineering Analysis Section. He became Engineering Group Leader and then Department Manager in 2008. In 2011 he was appointed Head of Physics and Engineering Development Division. He has held other senior engineering posts such as Engineer in Charge and Deputy Chief Engineer. David is committed to staff development and has initiated many of the training schemes presently being run at CCFE - including the apprentice and graduate programmes - helping to achieve accreditation by the Institution of Engineering and Technology, Institution of Mechanical Engineers and the Power Academy.

## Auditors

Details of the remuneration of the Group's auditor are set out in Note 8. The auditor did not undertake any non-audit services during the year.

So far as the Directors are aware, all relevant audit information has been provided to the auditors and there is no relevant audit information of which the auditors are unaware. The Directors have taken all the steps required as Directors to make themselves aware of any relevant audit information and to establish that the auditors are also aware of it.

## Financial Risk Management

The nature of the activities of the Authority and its subsidiary mean that the Group is not exposed to the same degree of financial risk, or variability in financial instruments, faced by many other business entities. The two key financial risks facing the group are:

a) Foreign exchange risk, where the Group operates internationally and is exposed to foreign exchange risk from various currency exposures, primarily the Euro. To manage foreign exchange risk, the Group may use forward contracts for the purchase and sale of foreign currencies.

b) Liquidity risk, where an exposure arises from uncertainties about the timing and amount of some of the Group's income, particularly from Europe. The Group has a facility to request temporary working capital funding from the Department for Business, Innovation and Skills should the need arise. This was not utilised during either the current or preceding financial years.

Exposure to interest rate and credit risk is low.

Further details of the Group's accounting policies on financial instruments (including hedging) and financial risk management can be found in Notes 3.16 and 4 to the Accounts respectively.

## Charitable and political contributions

During the year, the Authority made charitable contributions of £4,076 (2012/13 £7,431) to local charities in line with its policy of supporting local stakeholders.

No political contributions were made in the current or previous year.

## Pensions

The Authority retains overall responsibility for oversight of the management of the Combined Pension Scheme (CPS), the Principal Non-Industrial Superannuation Scheme (PNISS) and the Protected Persons Superannuation Scheme (PPSS) and for the preparation of their annual accounts. The management of the Schemes and the preparation of their accounts is carried out under contract by AON Hewitt. Further details of Authority pension arrangements are set out in Note 22 to the accounts. The pension scheme resource accounts are at [www.official-documents.gov.uk](http://www.official-documents.gov.uk).

In accordance with the FReM, these schemes are accounted for as defined contribution schemes in these financial statements and the obligations recognised are limited to the contributions due. Further detail is at Note 3.4 c.

Details of Executive Directors' pension entitlements are included in the Remuneration Report.

## Statement of payment policy and practice

The Authority follows the Confederation of British Industry Prompt Payment Code. Its policy is to settle the terms of payment with suppliers when agreeing the terms of each transaction, to ensure that suppliers are aware of the terms of payment, and to abide by the terms of payment.

In addition, the Authority has complied, where applicable, with the prompt payment guidance for public sector organisations, issued in 2008/09. This set out the requirement to pay suppliers within 10 days in order to assist the cash flow of smaller businesses, subject to the submission of valid invoices and to the usual financial control procedures.

During the year, the Authority's suppliers were paid within an average of just over 7 days (2013 - 6 days), which is well within both the 30 days specified in the Prompt Payment Code and the 10 day public sector requirement referred to above.

## Research and development

Costs associated with the Authority's research and development activities are charged to the income statement as incurred. These activities are described in more detail in the Strategic report.

## Event after the reporting period

The new 5-year bilateral JET Operating Contract between the Authority and the European Commission was signed by both parties in June 2014 (with retrospective effect from 1 January 2014).



# Staff

The Authority is an equal opportunity employer and does not discriminate on the grounds of age, sex, ethnic origin, religious belief, sexual orientation, Trade Union membership or disability.



The Authority takes the development of its staff seriously and utilises various tools and learning methods to ensure that staff are technically competent and capable as well as being aligned to deliver the organisation's objectives and strategy going forward. Special needs are taken account of. Staff are encouraged to be actively involved in their personal/career development. Several schemes are in place to support staff achieving chartered status. The Authority also operates graduate and apprentice schemes.

## Staff Engagement

Over the last year, internal communications to staff have been improved in many regards, reflecting its importance in an organisation that is undergoing change in many areas. A review of internal communications has been undertaken and a formal plan and

strategy for internal communications adopted, focussing on finding ways of improving upwards and downward communications through divisions and departments.

The Authority operates an employee bonus scheme based on delivery of the corporate performance measures and staff are kept updated on progress in delivery of these measures. Corporate objectives are promulgated through the organisation via departmental and personal objectives.

The intranet is being used more regularly than ever before, keeping staff informed of news both internally and in the wider world. The quarterly In Brief news, that forms the basis of team talks, has been streamlined and integrated much more closely with the intranet. A series of successful 'Show

and Tell' events has enabled different departments on site to show their work and facilities to all staff members. In the most recent, 200 people spent a lunchtime seeing progress on MAST-Upgrade. Staff talks from the Executive team are well attended every quarter.

## Sickness absence

The average sickness absence per employee for the Authority during the 2013/14 year was 4.9 days per person, compared with 4.7 days in 2012/13. This is considerably lower than the public sector average of 8.7 days per employee for all public services workers in the CIPD 2013 Absence Management annual survey report.

**Above** Apprentice scheme manager Steve Hall with award winning apprentices

# Assurance

## The Authority was awarded Gold for the third consecutive year in the Royal Society for the Prevention of Accidents (RoSPA) Occupational Health and Safety Awards.

### Health, Safety & Environment Incident statistics

One of the Authority's measures of safety performance is the Accident Frequency Rate, which is the ratio of work-related lost time injuries per 100,000 hours worked. The 4 quarter rolling average (for our employees and contractors combined) is 0.29 as measured in April 2014. This figure has remained broadly stable throughout the preceding year and compares favourably when benchmarked with other organisations. CCFE has maintained a very positive ratio of near-miss reports to incidents, reflecting a positive reporting culture. A continuing behavioural safety programme supported by the encouragement of senior managers has helped maintain this culture. There were no major reportable injury accidents during the year.

### Electrical Safety

The JET and MAST experimental devices at Culham operate at very high voltages and currents and electrical safety is therefore of critical importance to the Authority's overall safety performance and is arguably the Authority's most significant day-to-day safety hazard. As with all safety matters, performance is closely monitored and deficiencies corrected. Consequently, the high standard of electrical safety at CCFE was maintained through the year.

### Health Physics

The total radiation dose to the 553 monitored/classified workers for the period of 1 April 2013 to 31 March 2014 is 3.150mSv. This is higher than usual due to an anomalous dose of 1.010mSv accrued by an individual where the dosimeter went through the hand luggage x-ray machine on a trip overseas. It is recommended that workers take their dosimeters with them

when travelling abroad for work as it records occupational dose. In future individuals will be issued with transit badges which will accompany their legal dosimeter and record only the transit dose.

Even taking into account this anomalous result the total radiation dose continues to be well below legal dose limits and below the Culham Site dose constraints. The highest true individual cumulative radiation dose this year was 0.290mSv, substantially below the individual legal limit of 20mSv/year, and the site dose constraint of 5mSv/year. The average occupational dose received by employees was 0.006mSv, which is 0.25% (0.3%) of the average background radioactive dose received by members of the public (2.4mSv).

### Discharge authorisations

All the active discharges from Culham were compliant with Environmental Permitting regulations (2010 & amendment 2011) for the accumulation and discharge of radioactive waste that were set by the Environment Agency (EA).

### Management Systems and Quality

The Authority operates an integrated management system for all its activities and is certified to the internationally recognised standards for quality (ISO9001), environmental (ISO14001), and health and safety (BS OHSAS18001) management. This certification was reconfirmed in September 2012 following an external audit and was subject to a further surveillance audit in June 2013. In addition, the Authority Health Physics Group is accredited to ISO17025, the international standard for testing laboratories.

The internal audit programme provides assurance to management and stakeholders that the required standards are being maintained. Operating to the international standards has provided the Authority with a strong base from which to meet the demanding requirements set by Fusion for Energy when commissioning work in relation to ITER. During the year, as part of the continual improvement process, work has continued to integrate and simplify management systems removing unnecessary bureaucracy.

### Security

The Authority, working with the Office of Nuclear Regulation and, increasingly, with the BIS Security team continues to maintain a strong security profile. Recent alignment of the Security Policy framework is now providing a balanced set of requirements.

Improvements to solutions for all aspects of security, personnel, information and physical, are considered and implemented as appropriate; changes have been made to a number of security administrative arrangements. The recent upgrade in perimeter CCTV coverage of the site has improved site perimeter security. Contingency plans for site emergencies have been reviewed and site exercises are held to provide practice for individuals and systems using cross site teams.

Information security and risks are monitored by the Information Assurance Steering Committee, chaired by the Senior Information Risk Officer (SIRO). During the year the Accounting Officer appointed Catherine Pridham as the new SIRO. An information audit was completed in autumn 2013, and has been used to update the Information Asset register and Information



Asset Owners. A positive assessment was made using the Information Assurance Maturity Model Level 2. An assessment using the "10 Steps to Cyber Security" model has commenced and will continue in 2014/2015. This will be used to inform further enhancements to Information Assurance and IT security.

Information Security policies were updated and guidance issued to staff, ready for implementation of the change in Government Security Classification Policy on 2 April 2014. Staff undertook mandatory Responsible for Information and Government Security Classification computer based training.

**Above** The Authority environmental officer, Rachel Seymour is promoting environmental sustainability at Culham.

There were no reportable personal data related incidents during the year.

**Professor Steve Cowley, FRS**  
Chief Executive and Accounting Officer  
27th June 2014





# Statement of Directors' and Accounting Officer's Responsibility

Section 4(3) of the Atomic Energy Authority Act 1954 requires the United Kingdom Atomic Energy Authority to prepare a statement of accounts for each financial year in the form and on the basis set out in the Accounts Direction. The financial statements are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Authority and of its net resource outturn, application of resources, change in taxpayers' equity and cash flows for the financial year.

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

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

The Accounting Officer of the Department for Business, Innovation and Skills (BIS) has appointed the Chief Executive as Accounting Officer of the United Kingdom Atomic Energy Authority. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the Authority's assets, are set out the Accounting Officers' Memorandum published by HM Treasury.

## External audit

The Accounting Officer and Directors confirm that:

- there is no relevant audit information of which the auditors are unaware;
- all relevant steps have been taken to ensure that they are aware of relevant audit information; and
- all steps have been taken to establish that the auditors are aware of the information.

Details of the remuneration of the Group's auditor are set out in Note 8.



# Governance Statement

## Scope of Responsibility

As Accounting Officer, I have responsibility for maintaining a sound system of governance and internal control that supports the achievement of the United Kingdom Atomic Energy Authority's policies, aims and objectives, whilst safeguarding the public funds and assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Managing Public Money. I am assisted in this across the Authority Group as a whole by the Chief Financial Officer.

## Purpose of the Governance Statement

The Governance Statement, for which I am personally responsible, sets out how I have discharged my responsibility to manage and control the Authority's resources during the year. It also sets out the governance framework and control structure of the Authority, its stewardship and corporate governance, and the framework for and effectiveness of the risk management process in place.

## The Authority's Governance Framework and Structure

### The Board

The United Kingdom Atomic Energy Authority is controlled through its Board of Directors, who are appointed by the Secretary of State for BIS. The Board's main role is to establish the Authority's vision, mission and values, set strategy and structure, and exercise accountability to the Authority's stakeholders.

The Board, which met five times during the year, has a schedule of matters reserved for its approval. This includes: establishing the overall strategic direction of the Authority within the policy and resources framework agreed with the responsible Government Minister; reviewing the Authority's corporate objectives and goals; approving the annual accounts, budget and corporate plan; reviewing and approving proposals to start new activities or to discontinue existing activities; ensuring that high standards of corporate governance are observed at all times; and reviewing the safety, environmental and security performance of the Authority.

The Board delegates responsibility for day-to-day and business management control to the Chief Executive who is assisted by key senior managers comprising the Executive Committee. The Executive Committee meets monthly. Specific responsibilities delegated to the Executive Committee include: development of Authority performance measures; implementation of the strategies and policies as determined by the Board; monitoring of the operating and financial results against plans and budgets; and developing and implementing risk management systems. In addition, the Executive Committee now monitors progress on outstanding actions arising from internal audits on a monthly basis, to demonstrate senior management's commitment to closing out these actions.

### The roles of the Chairman and Chief Executive

The division of responsibilities between the Chairman of the Board and the Chief Executive is clearly defined and has been approved by the Board. The Chairman leads the Board in the determination of its strategy and in the achievement of its objectives.

The Chief Executive has direct charge of the Authority on a day-to-day basis and is accountable to the Board for the financial and operational performance of the Authority and its subsidiaries. The Chief Executive is also the Authority Accounting Officer and is responsible to Parliament through the Committee of Public Accounts and other Select Committees for the stewardship of resources. His responsibilities are set out in a letter from the BIS Permanent Secretary and the accompanying Accounting Officer Memorandum. The Accounting Officer has a personal responsibility for the propriety and regularity of the public finances for which he is answerable; for the keeping of proper accounts; for prudent and economical administration; for the avoidance of waste and extravagance; and for the efficient and effective use of all available resources. He is also responsible for taking formal action by issuing an Accounting Officer Direction, if the Authority Board is contemplating a course that would infringe these requirements. No Directions were issued during the year.

# Governance Statement continued

## Directors and Directors' independence

From 1 April 2013 to 31st October 2013, the Board comprised the Chairman, two Executive Directors and three independent Non-Executive Directors. The Chief Financial Officer was in attendance as Authority Secretary. For the remainder of the year, the Board comprised the Chairman, one Executive Director and three independent Non-Executive Directors, with the Chief Financial Officer in attendance. The change in the number of Executive Directors was made to bring the composition of the Authority Board in line with other bodies that report to BIS. A list of Board members and their biographical details is included in the Directors' Report.

The Non-Executive Directors constructively challenge and help develop proposals on strategy, and bring strong, independent judgement, knowledge and experience to the Board's deliberations. The independent Directors are of sufficient calibre and number that their views carry significant weight in the Board's decision making.

The Board considers all its Non-Executive Directors to be independent in character and judgement. No Non-Executive Director:

- has been an employee of the Authority within the last five years;
- has, or has had within the last three years, a material business relationship with the Authority or its former or current subsidiaries;
- receives remuneration from the Authority other than a Director's fee;
- has close family ties with any of the Authority's advisers, Directors or senior employees;
- holds cross-directorships or has significant links with other Directors through involvement in other companies or bodies; or
- has served on the Board for more than nine years.

## Board Committees

### Attendance

The number of full Board meetings and committee meetings attended by each Director during the year was as follows:

	Board	Remuneration Committee	Audit Committee
<b>Roger Cashmore</b>	5 (5)	2 (2)	4 (4)
<b>Keith Burnett</b>	4 (5)	2 (2)	1 (4)
<b>Steve Cowley</b>	5 (5)	–	–
<b>Martin Cox</b>	2 (2)	–	–
<b>Peter Jones</b>	5 (5)	2 (2)	4 (4)
<b>Steve McQuillan</b>	5 (5)	2 (2)	4 (4)

Figure in brackets indicate the maximum number of meetings in the period in which the individual was a Board member.

The attendance figures demonstrate that all Board Members give high priority to their responsibilities and fully participate in the Authority's governance structure.

### Remuneration Committee

The Remuneration Committee met twice during the year. All its members are independent Non-Executive Directors. Where necessary, non-committee members are invited to attend.

The Committee's principal responsibility is to make recommendations to BIS on the level of Directors' remuneration. In addition the Committee regularly reviews the Authority's executive remuneration policy in relation to its competitors and industry norms and contract periods.

As the members of the Authority Board are appointed by BIS, the Authority does not maintain a nominations committee.

### Audit Committee

The Audit Committee met four times during the year. All its members are independent Non-Executive Directors.

During the year, the Committee had at least one member possessing what the Smith Report describes as recent and relevant financial experience (Peter Jones). It will be seen from the Directors' biographical details included in the Directors' Report that the other members of the Committee brought to it a wide range of experience from positions at the highest level in the UK scientific and business community.



Under its terms of reference, the Committee is responsible for: monitoring the effectiveness of the external audit process and approving the terms of engagement and remuneration of the external auditor; endorsing the Authority's policy on the provision of non-audit services by the external auditor (none were provided in 2013/14); monitoring and reviewing the effectiveness of the internal audit programme and the implementation of recommendations arising from it; reviewing the actions and judgements of management in relation to annual and other financial statements before submission to the Authority Board; reviewing annually the system of internal control and the processes for monitoring and evaluating the risks facing the Authority; and reviewing the Authority's procedures for detecting and preventing fraud and its whistleblowing policy.

### **Framework Document**

During the year, an updated Framework Document between BIS and the Authority was signed. The Framework Document sets out the framework within which the Authority will operate, including its purpose, governance and accountability and my responsibilities as Accounting Officer. The updating included incorporation of the latest mission and objectives for the Authority, as well as revisions to reflect current governance arrangements.

### **Change of Chief Financial Officer**

A new Chief Financial Officer was appointed from 1st January 2014. Careful succession planning, including a detailed handover plan approved by me, has ensured knowledge transfer from the previous CFO. To maintain continuity of advice to me as Accounting Officer, the previous CFO has been retained as Director and Adviser to the CEO/CFO to the end of July 2014.

### **Corporate Governance Review Processes**

The Authority's corporate governance arrangements are kept under constant review to ensure that they are compliant with best practice as applicable to the public sector, and with any additional Treasury requirements. In addition, the Board keeps its own performance under review. It has made a formal assessment during the year of its compliance with the Corporate Governance Code, and has assessed its own effectiveness. The assessment concluded that the Authority met the requirements of the Code. No major issues requiring inclusion in the Governance Statement were identified. However, the Board and the Remuneration Committee will be taking further action on capability and succession planning during 2014/15.

The Board also reviewed the effectiveness of the Remuneration and Audit Committees during the year, and concluded that both Board committees were operating satisfactorily. Action has been taken to progress some detailed recommendations to improve performance still further. For example, the Audit Committee is now regularly reviewing the results from the compliance testing of enhanced controls in key areas of risk.

The Board Assurance Committee, chaired by one of the non-executive directors, was re-established early in 2013/14 to strengthen Board oversight of assurance matters. Since then it has met on three occasions and looked at a number of issues including: preparation for future tritium operations, quality of scientific output, actions to reduce greenhouse gas losses, and succession planning for safety related positions. The Committee includes expert external members, in addition to the non-executive chair, to bring independent views on relevant issues.

The Authority's subsidiary, AEA Insurance Ltd, also has appropriate governance arrangements in place. These are formally reviewed and updated as necessary by its Board of Directors, which includes two Directors from the Authority. The former CFO of the Authority has remained on the Board throughout the reporting year to provide continuity.

The Group has a 50% interest in a joint venture, Harwell Science and Innovation Campus Public Sector Limited Partnership (HSIC PubSp), the public sector partner in Harwell Oxford, which is responsible for the development of the Harwell Oxford Campus. Both HSIC PubSp and Harwell Oxford have appropriate and fully documented governance arrangements in place, covering such matters as membership of and decisions made by their Boards of Directors, appointment and removal of Directors, funding and confidentiality. There is an Authority Director on the Boards of both HSIC PubSp and Harwell Oxford.

During the year, a new private sector partner, Harwell Oxford Developments, comprising Development Securities (Projects) Ltd and Harwell Oxford Partners LLP, was selected for Harwell Oxford. During the transitional period while the new arrangements were being concluded, the Harwell Oxford Operational Committee met to ensure continuity. The Authority and the new private sector partner were represented at the Committee's meetings. Representatives of the new private sector partner were also appointed to the Harwell Oxford Board, which ensured continuity of Board operation.

### **The Risk and Internal Control Framework Responsibilities for Managing Risk**

The Board has delegated day-to-day responsibility for risk management to the Chief Executive who is responsible for ensuring that a sound system of risk management is in place.



# Governance Statement continued

On behalf of the Chief Executive, the Head of Assurance has been appointed to co-ordinate risk management arrangements, ensure consistency of approach and periodically report risk to the Executive and Board. Ownership of divisional or functional risk registers is assigned to relevant senior managers and ownership of individual risks is assigned to the most appropriate manager.

The Authority Chief Financial Officer is nominated as the Senior Information Risk Owner (SIRO), with special responsibilities for information risks. Following the change of Chief Financial Officer noted above, the new SIRO has undertaken appropriate training.

## The Framework for Managing Risk

A Risk Management Policy and Procedure is in place and the Board has formally reviewed a statement of the Authority's risk appetite which is embedded within the Authority's risk management arrangements.

A Corporate Risk Review Group acts as a focal point for the identification, evaluation and mitigation of key risks which are recorded on the Authority's risk registers. Risks have been captured in terms of both threats and opportunities to achieving Authority objectives. The Authority's Risk Registers are regularly reviewed and updated to ensure that they are relevant to the activities of the Authority, and underpin the risk and control framework in place across the organisation.

## Information Assurance

Information risks are overseen by an Information Assurance Steering Committee (chaired by the SIRO), which feeds significant risks into the Corporate Risk Review Group. In addition, Information Asset Owners have been appointed throughout the Authority, to take the lead in identifying, monitoring and controlling data-related risks. The SIRO has confirmed that there are no issues relating to information risks or information assurance that require inclusion in the governance statement. There have been no reportable data breaches or data loss incidents during the year.

## Key Risks

The Authority is exposed to a number of key risks which can be grouped into four areas:

- transition of finance and HR services from SAP to the Oracle shared service provided by UK Shared Business Services Ltd;
- funding and development of current and future programmes and business, including risks associated with the timing of funding from key customers and with the development of additional commercial work;
- recruitment and retention of key skills and capabilities required for the success of the organisation; and
- technical and reputational risks.

The action plans and strategies in place to mitigate these key risks are kept under regular review.

Business reports are prepared by the Authority executive team focusing on the following areas:

- key risks to the achievement of business objectives;
- progress against key performance indicators; and
- progress of programme against budget.

The Executive Committee considers assurance and performance reports quarterly and the financial report monthly. The Board takes an annual report on key risks and updates in the event of significant changes, and regular reports on performance and financial progress.

A number of improvements have been made to the Authority's business risk management arrangements during the year. These include updated project management procedures to ensure that all significant project risks are included on the appropriate risk registers. Internal Audit's monitoring tool will be used in future for more effective tracking of actions to mitigate risk.

## Going Concern

The financial statements have been prepared on a going concern basis. The Authority relies on funding from the European Commission to finance the operation of the JET programme. A new contract between the Authority and the Commission for the operation of JET, signed in June 2014 and backdated to 1 January 2014, covers a five year period to 31st December 2018. The Board, Executive team and I therefore believe that the commitment of Europe to fusion research evidenced by the contract is sufficient to support continuing operations for the foreseeable future.

In addition, the Authority's Statement of Financial Position includes liabilities of over £255m for site restoration and restructuring costs. Matching reimbursement receivables are recognised for the majority of these liabilities on the basis of assurances from BIS that it continues to accept responsibility in principle for these costs, and provides for them in the BIS departmental resource accounts.



## Other Matters

The Authority has robust processes in place to comply with the current austerity measures introduced across the public sector, which aim to reduce expenditure and monitor use of limited public sector resources. Acting on behalf of the Accounting Officer, the Chief Financial Officer reviews and signs off monthly data-sets of accounts payable transactions, with particular emphasis on procurement, travel, events and hospitality.

During the year under review, the Authority has reviewed the tax arrangements of all its off-payroll appointments. All contractors within the scope of this exercise have been required to provide evidence of tax compliance. All off-payroll appointments are tax compliant as at 31st March 2014. The Authority also has arrangements in place to ensure that any future off-payroll appointments are fully tax compliant.

## Fraud Response Plan

During the year, the Audit Committee reviewed and endorsed the Authority's Fraud Response Plan, which has been updated in accordance with best practice, and the Fraud Risk Register.

## Review of effectiveness of risk management and internal controls

As Accounting Officer, I have responsibility for reviewing the effectiveness of the systems of risk management and internal control. My review of the effectiveness of these systems is informed by the work of the internal auditors and the senior managers within the Authority who have responsibility for the development and maintenance of the internal control framework, the SIRO's report on how risks to information are being managed and controlled, and comments made by the external auditors in their management letter and other reports.

The Authority has an internal audit department which operates in accordance with Public Sector Internal Audit Standards and an Audit Charter approved by the Audit Committee. The work of the internal audit department is determined by analysis of the risks to which the Authority is exposed. The annual internal audit programme is based on this analysis. It includes reviews which test and challenge the effectiveness of the management of risks and information.

During the year, a number of improvements to Internal Audit processes were introduced, including the use of a three year audit plan, additional compliance testing of closed audit recommendations and improvements to the scope and content of audits to ensure compliance with HM Treasury guidance.

The Head of Internal Audit provides me, as Accounting Officer, with regular reports on internal audit activity in the Authority. These reports include an independent opinion on the adequacy and effectiveness of the Authority's system of risk management and internal control. The Head of Internal Audit has confirmed that there is a generally sound system of risk management and internal control within the Authority group and that the adequacy and effectiveness of the control environment has operated to an acceptable standard through the year now that weaknesses identified in 2012/13 have been addressed.

In last year's Governance Statement, I noted that the Authority's management team was in the process of implementing the recommendations of an external review of our financial management and controls. All forty-nine of the recommendations from this review were completed during the year. A programme of work is also under way to review and, where appropriate, test the new controls put in place as a result of the review. In addition, the following table summarises progress during the year on completing recommendations and actions arising from Internal Audit reviews:

Carried forward from previous years	21
2013/14 Internal Audit recommendations raised	27
Recommendations from external review	49
Completed on time	(87)
Completed later than due date	(3)
Total actions outstanding but not overdue at 31st March 2014	7

The Audit Committee has reviewed a detailed schedule of closed audit recommendations including a summary of evidence supporting closure of the recommendations, and has noted this successful outcome following the attention given to this area by Authority senior management during the year.

I have considered the evidence provided to support the annual Governance Statement. My conclusion is that the Authority's overall governance and internal control structures are generally sound and fit for purpose, and have been reinforced by the actions taken during the year.

## Professor Steve Cowley, FRS

Chief Executive and Accounting Officer  
27th June 2014



# Remuneration Report

The United Kingdom Atomic Energy Authority applies the Principles of Good Governance relating to Directors' remuneration to the extent that they are appropriate to the Authority. The principal implementation arrangements are set out below.

## Remuneration policy

The remuneration of Directors is set by the Secretary of State for BIS with the approval of HM Treasury in accordance with the Atomic Energy Authority Act 1954. The Authority Remuneration Committee makes recommendations to BIS on the overall remuneration package for Executive Directors. The Non-Executive Directors who form the Committee are not involved in decisions relating to their own remuneration.

In reaching its recommendations, the Committee has regard to the following considerations:

- the need to recruit, retain and motivate suitably able and qualified people to exercise their different responsibilities; and
- the funding available to the Authority.

The Committee takes account of the evidence it receives about wider economic considerations and the affordability of its recommendations.

## Service contracts

Directors are appointed by the Secretary of State for BIS. This is normally for a three year term that may be renewed upon expiry in accordance with the guidelines issued by the Commissioner for Public Appointments.

## Remuneration and pension entitlements

The individual components of the remuneration packages are:

### Salary and fees

Executive Directors receive a basic salary which is reviewed annually. The Chairman and Non-Executive Directors receive fees for their services. Members of the Executive Committee also receive a basic salary which is reviewed annually.

### Benefits

Executive Directors are entitled to certain benefits under the terms of their service contracts. These principally comprise a car allowance and private health care, and, for the current CEO, relocation assistance.

All Directors are also reimbursed for reasonable expenses incurred in line with the policy for the Authority's employees. These reimbursements are not included in the table below.

### Performance related bonuses

The performance bonuses for Executive Directors are calculated in accordance with performance against agreed objectives, confirmed by BIS on the basis of recommendations from the Remuneration Committee. The total bonus is made up of two components: the performance of the Authority against specific quantified targets, and the performance of the individual against specific targets. Members of the Executive Committee receive bonuses based on formulae that are agreed each year by the Remuneration Committee. The performance related bonuses for 2013/14 shown in the table below are an estimate of the amounts which may be payable. The final amounts payable will be subject to approval by BIS where applicable.

Individual Directors' remuneration for the year is shown in the table below, with salaries disclosed on an accruals basis.

This part of the report is subject to audit.

	Salary/ Fees £	Benefits <sup>(3)</sup> £	Annual Bonus £	Pension benefit <sup>(5)</sup> £	2014 Total £
<b>Chairman</b>					
Roger Cashmore	25,000	–	–	–	25,000
<b>Non-Executive Directors</b>					
Keith Burnett	15,000	–	–	–	15,000
Peter Jones	15,000	1,529	–	–	16,529
Stephen McQuillan	15,000	555	–	–	15,555
<b>Executive Directors</b>					
Steve Cowley	205,000	2,312 <sup>(4)</sup>	23,748	34,949	266,009
Martin Cox (to 31st October 2013) <sup>(1)</sup>	114,119	5,000	12,987	24,192	156,298
<b>Members of the Executive Committee</b>					
Eric Hollis <sup>(2)</sup>	103,000	5,000	11,310	–	119,310
David Martin <sup>(2)</sup>	112,233	6,060	11,986	154,094	284,373
Catherine Pridham <sup>(2)</sup>	90,762	6,060	11,983	20,393	129,198
	695,114	26,516	72,014	233,628	1,027,272

	Salary/ Fees £	Benefits <sup>(3)</sup> £	Annual Bonus £	Pension benefit <sup>(5)</sup> £	2013 Total £
<b>Chairman</b>					
Roger Cashmore	25,000	–	–	–	25,000
<b>Non-Executive Directors</b>					
Keith Burnett	15,000	–	–	–	15,000
Peter Jones	15,000	1,096	–	–	16,096
Stephen McQuillan	15,000	401	–	–	15,401
<b>Executive Directors</b>					
Steve Cowley	176,005	22,684 <sup>(4)</sup>	16,893	40,684	256,266
Martin Cox	114,119	5,000	11,485	25,633	156,237
<b>Members of the Executive Committee</b>					
Eric Hollis	103,000	5,000	9,356 <sup>(6)</sup>	–	117,356
Derek Stork (to 12th June 2012)	20,747	1,014	–	4,654	26,415
	483,871	35,195	37,734	70,971	627,771

- (1) Martin Cox's appointment as an Executive Director ended on 31st October 2013. He remained on the Executive Committee throughout the year and his full year remuneration is therefore included in this line of the report.
- (2) Eric Hollis remained on the Executive Committee throughout the year, after his appointment as CFO came to an end. David Martin and Catherine Pridham were on the Executive Committee throughout the year. Catherine Pridham's salary increased from £86,683 to £103,000 on her appointment as CFO on 1st January 2014. David Martin's salary increased from £98,980 to £114,000 with effect from 1 May 2013 to reflect his appointment as Operations Director. In both cases, the remuneration disclosed is on an accruals basis.
- (3) Expenses disclosed for the Chairman and Non-Executive Directors in 2014 and in the comparatives for 2013 relate to travel for Board and other meetings and include the tax liability on these expenses which was met by the Authority.
- (4) The expenses disclosed for Steve Cowley include an adjustment of £2,525 relating to allowances overpaid in 2012/13 and recovered in the current year, and are disclosed on an accruals basis, without adjustment of the comparative. His benefits for 2013/14 before adjustment were £4,837. The adjusted comparative would have been £20,159.
- (5) The value of pensions benefits accrued during the year is calculated as (the real increase in pension multiplied by 20) plus (the real increase in any lump sum) less (the contributions made by the individual). The real increases exclude increases due to inflation or any increase or decrease due to a transfer of pension rights.
- (6) The annual bonus for Eric Hollis in 2012/13 after approval of final bonuses was £5,504. The comparative in the report has not been changed.

# Remuneration Report continued

## Remuneration ratios

	2013/2014 £	2012/2013 £
Highest Paid Director's Total Remuneration	231,060	215,582
Median Total Remuneration	39,455	38,468
Ratio	5.9	5.6

Reporting bodies are required to disclose the relationship between the remuneration of the highest paid director in their organisation and the median remuneration of the organisation's workforce.

The remuneration of the highest paid director in the Authority in the year 2013/14 was £231,060 (2012/13 - £215,582). This was 5.9 times (2012/13 - 5.6 times) the median remuneration of the workforce, which was £39,455 (2012/13 - £38,468).

No employee received remuneration in excess of the highest-paid Director in either 2013/14 or 2012/13.

Total remuneration includes salary, performance-related pay and benefits in kind. It does not include pensions benefit, employer pension contributions and the cash equivalent transfer value of pensions.

## Pension entitlements

Executive Directors and members of the Executive Committee are members of the United Kingdom Atomic Energy Authority Combined Pension Scheme that pays an annual pension based on pensionable final earnings together with a lump sum at normal retirement age. Benefits are also payable in the event of death or ill health retirement. The Authority also operates an unfunded pension arrangement for three former Chief Executives to take account of pensionable pay above the earnings cap introduced by the Finance Act 1989.

Further details of the pension schemes and unfunded pensions can be found at Note 22 to the accounts.

The pension entitlements shown in the table below (which is subject to audit) are those that would be paid annually on retirement based on service to 31 March 2014 and include the value of added years paid for by Directors.

	Accrued Pension 2013 £	Lump sum 2013 £	Increase in accrued pension £	Increase in lump sum £	Accrued Pension 2014 £	Lump Sum 2014 £
<b>Executive Directors</b>						
Steve Cowley	8,289	24,868	1,983	5,948	10,272	30,816
Martin Cox	47,595	142,786	1,427	4,279	49,022	147,065
<b>Members of the Executive Committee</b>						
Eric Hollis	51,500	154,500	–	–	51,500	154,500
David Martin <sup>(1)</sup>	41,766	125,299	7,044	21,130	48,810	146,429
Catherine Pridham <sup>(1)</sup>	906	2,717	1,185	3,555	2,091	6,272
Derek Stork <sup>(2)</sup>	45,681	137,042	–	–	–	–
	195,737	587,212	11,639	34,912	161,695	485,082

<sup>(1)</sup> This is the first year of disclosure of the remuneration of David Martin and Catherine Pridham.

<sup>(2)</sup> 2013 accrued pension and lump sum payments disclosed for Derek Stork were as at the date of his retirement from the Authority in June 2012.

The following table (which is subject to audit) sets out the Cash Equivalent Transfer Value (CETV) of the Executive Directors' and Executive Committee members' accrued pension entitlements which have been calculated by the Scheme managers in accordance with the Occupational Pension Schemes (Transfer Values) Regulations 1996 as amended, having taken actuarial advice. The transfer values do not represent sums paid or payable to the Directors or Executive Committee members but represent a potential liability of the pension scheme or the Authority.

	Transfer Value 2013 £	Directors' contributions £	Increase net of contributions £	Transfer Value 2014 £
<b>Executive Directors</b>				
Steve Cowley	169,541	10,659	29,894	210,094
Martin Cox	1,046,749	8,627	23,026	1,078,402
<b>Members of the Executive Committee</b>				
Eric Hollis	1,091,569	–	–	1,091,569
David Martin	842,633	7,903	161,854	1,012,390
Catherine Pridham	15,071	6,862	12,858	34,791
	3,165,563	34,051	227,632	3,427,246

<sup>(1)</sup> The actuarial factors used to calculate CETVs changed in 2013/14. The CETVs at 31/3/13 and 31/3/14 have both been calculated using the new factors, for consistency. The CETV at 31/3/13 therefore differs from the corresponding figure in last year's report, which was calculated using the previous factors.

Members of the pension scheme have the option to pay Additional Voluntary Contributions; neither the contributions nor the resulting benefits are included in the above tables.

On behalf of the Board

**Professor Sir Keith Burnett, CBE, FRS**

Chairman of Remuneration Committee  
27th June 2014

**Professor Steve Cowley, FRS**

Chief Executive and Accounting Officer  
27th June 2014



# The Certificate and Report of the Comptroller and Auditor General to the Houses of Parliament

## The United Kingdom Atomic Energy Authority

I certify that I have audited the financial statements of the United Kingdom Atomic Energy Authority for the year ended 31 March 2014 under the Atomic Energy Authority Act 1954. The financial statements comprise: the Group and Authority Statements of Comprehensive Income, Financial Position, Cash Flows, Changes in Taxpayers' Equity; and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

### Respective responsibilities of the Board, Accounting Officer and auditor

As explained more fully in the Statement of Directors' and Accounting Officer's Responsibilities, the Board and the Accounting Officer 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 Atomic Energy Authority Act 1954. 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 the group's and the United Kingdom Atomic Energy Authority's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the United Kingdom Atomic Energy Authority; 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 and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by me in the course of performing the audit. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate.

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

### Opinion on regularity

In my opinion, in all material respects the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements 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 the group's and of the United Kingdom Atomic Energy Authority's affairs as at 31 March 2014 and of the group's and the parent's net income for the year then ended; and
- the financial statements have been properly prepared in accordance with the Atomic Energy Authority Act 1954 and Secretary of State 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 Secretary of State directions made under the Atomic Energy Authority Act 1954; and
- the information given in the Strategic and Directors' Reports elements 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 returns adequate for my audit have not been received from branches not visited by my staff; or
- the financial statements and the part of the Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

### **Report**

I have no observations to make on these financial statements.

### **Sir Amyas C E Morse**

Comptroller and Auditor General  
National Audit Office  
157-197 Buckingham Palace Road  
Victoria, London, SW1W 9SP

30th June 2014



# Consolidated Statement of Comprehensive Income

## for the year ended 31 March 2014

	Note	Group		Authority	
		2014 £k	2013 £k	2014 £k	2013 £k
<b>Income</b>					
Revenue	5	99,062	95,028	98,467	94,684
Other income		190	18	1,669	209
Share of revenue of joint venture		(461)	(344)	–	–
		<b>98,791</b>	<b>94,702</b>	<b>100,136</b>	<b>94,893</b>
<b>Expenditure</b>					
Raw materials and consumables		18,019	17,355	18,019	17,355
Other external expense		19,954	20,693	19,954	20,693
Staff costs	6	49,826	43,652	49,826	43,652
Depreciation, amortisation and impairment		570	415	570	415
Other expense		10,836	12,207	10,993	12,456
		99,205	94,322	99,362	94,571
Revaluation credit		(8,187)	(476)	(8,187)	(476)
Costs capitalised		(738)	–	(738)	–
		<b>90,280</b>	<b>93,846</b>	<b>90,437</b>	<b>94,095</b>
		<b>8,511</b>	<b>856</b>	<b>9,699</b>	<b>798</b>
<b>Operating profit</b>					
Finance Income	9	284	479	135	251
Finance expense	9	(184)	(258)	(184)	(258)
Share of loss of joint venture after tax	14	(132)	(119)	–	–
		<b>8,479</b>	<b>958</b>	<b>9,650</b>	<b>791</b>
<b>Profit before tax</b>					
Income tax credit (debit)	11	(798)	1,775	(798)	1,775
		<b>7,681</b>	<b>2,733</b>	<b>8,852</b>	<b>2,566</b>
<b>Profit for the year</b>					
<b>Other comprehensive income</b>					
Net gain (loss) on revaluations		1,088	136	252	–
Actuarial gains (losses) on defined benefit pension plans		(162)	(112)	(162)	(112)
Income tax (debit)/credit relating to components of other comprehensive income		339	187	339	187
Other comprehensive income for the year		1,265	211	429	75
		<b>8,946</b>	<b>2,944</b>	<b>9,281</b>	<b>2,641</b>
<b>Total comprehensive income for the year ended 31/3/2014</b>					

The notes on pages 48 to 72 are an integral part of these financial statements.



# Consolidated Statement of Financial Position as at 31 March 2014

	Note	Group		Authority	
		2014 £k	2013 £k	2014 £k	2013 £k
<b>Non-current assets</b>					
Property, plant and equipment	12	22,587	21,677	22,587	21,677
Investment property	13	47,505	39,318	47,505	39,318
Intangible assets		–	5	–	5
Financial assets	14	10,980	9,802	13,523	13,049
Other receivables	16	253,413	247,641	253,413	247,641
<b>Total non-current assets</b>		<b>334,485</b>	<b>318,443</b>	<b>337,028</b>	<b>321,690</b>
<b>Current assets</b>					
Inventories		27	26	27	26
Trade and other receivables	16	23,996	15,100	24,367	15,146
Financial assets	14	8,574	9,705	–	–
Cash and cash equivalents	17	30,319	38,949	26,829	35,418
<b>Total current assets</b>		<b>62,916</b>	<b>63,780</b>	<b>51,223</b>	<b>50,590</b>
<b>Total assets</b>		<b>397,401</b>	<b>382,223</b>	<b>388,251</b>	<b>372,280</b>
<b>Current Liabilities</b>					
Trade and other payables	18	28,918	38,118	28,906	38,108
Provisions for liabilities and charges	21	6,680	6,580	5,846	5,275
<b>Total current liabilities</b>		<b>35,598</b>	<b>44,698</b>	<b>34,752</b>	<b>43,383</b>
<b>Non-current assets plus net current assets</b>		<b>361,803</b>	<b>337,525</b>	<b>353,499</b>	<b>328,897</b>
<b>Non-current liabilities</b>					
Other payables	18	94	94	94	94
Deferred income	19	2,030	1,431	2,030	1,431
Deferred income tax liabilities	20	9,372	8,912	9,372	8,912
Provisions for liabilities and charges	21	267,591	253,318	267,361	253,099
<b>Total non-current liabilities</b>		<b>279,087</b>	<b>263,755</b>	<b>278,857</b>	<b>263,536</b>
<b>Assets less liabilities</b>		<b>82,716</b>	<b>73,770</b>	<b>74,642</b>	<b>65,361</b>
<b>Taxpayers' equity</b>					
General reserve		13,658	13,658	13,658	13,658
Revaluation reserve		9,074	8,758	9,074	8,758
Retained earnings		59,984	51,354	51,910	42,945
		<b>82,716</b>	<b>73,770</b>	<b>74,642</b>	<b>65,361</b>

The notes on pages 48 to 72 are an integral part of these financial statements.

The Financial Statements on pages 44 to 72 were approved by the Board on 27th June 2014 and were signed on its behalf by:

**Professor Steve Cowley, FRS**  
Chief Executive and Accounting Officer

**Catherine Pridham, ACA**  
Chief Financial Officer

# Consolidated Statement of Cash Flows

## for the year ended 31 March 2014

	Note	Group		Authority	
		2014 £k	2013 £k	2014 £k	2013 £k
<b>Cash flows from operating activities</b>					
Profit for the year		7,681	2,733	8,852	2,566
Adjustments for non-cash transactions:					
- Depreciation, amortisation, and impairment		570	415	570	415
- Deferred income released	19	(160)	(18)	(160)	(18)
- Change in fair value of investment property	13	(8,187)	(476)	(8,187)	(476)
- Net finance income recognised		(100)	(221)	49	7
- Income tax debit (credit)	11	798	(1,775)	798	(1,775)
- Share of loss (profit) of joint venture		132	119	-	-
Changes in working capital:					
- (Increase)/Decrease in trade and other receivables		(9,781)	(1,590)	(10,106)	(1,601)
- (Increase)/Decrease in inventories		(1)	1	(1)	1
- (Increase)/Decrease in current financial assets		1,131	4,758	-	5,000
- Increase/(Decrease) in trade and other payables		(8,440)	(8,094)	(8,442)	(8,093)
- Use of provisions		9,140	(2,005)	9,600	(1,932)
<b>Net cash inflow (outflow) from operating activities</b>		<b>(7,217)</b>	<b>(6,153)</b>	<b>(7,027)</b>	<b>(5,906)</b>
<b>Cash flows from investing activities</b>					
Purchase of property, plant and equipment	12	(1,223)	(1,636)	(1,223)	(1,636)
Investment in joint venture		(474)	(7,318)	(474)	(7,318)
Interest received		284	479	135	251
<b>Net cash inflow (outflow) from investing activities</b>		<b>(1,413)</b>	<b>(8,475)</b>	<b>(1,562)</b>	<b>(8,703)</b>
<b>Cash flows from financing activities</b>					
		-	-	-	-
<b>Net increase/(decrease) in cash and cash equivalents in the period</b>		<b>(8,630)</b>	<b>(14,628)</b>	<b>(8,589)</b>	<b>(14,609)</b>
Cash and cash equivalents at the beginning of the period		38,949	53,577	35,418	50,027
<b>Cash and cash equivalents at the end of the period</b>		<b>30,319</b>	<b>38,949</b>	<b>26,829</b>	<b>35,418</b>

The notes on pages 48 to 72 are an integral part of these financial statements.

# Consolidated Statement of Changes in Taxpayers' Equity

for the year ended 31 March 2014

Group	General reserve £k	Revaluation reserve £k	Retained earnings £k	Total £k
Balance at 1 April 2012	13,658	8,870	48,298	70,826
<b>Changes in Taxpayers' Equity 2012/2013</b>				
Total comprehensive income for the year	-	187	2,757	2,944
Depreciation transfer	-	(299)	299	-
<b>Balance at 31 March 2013</b>	<b>13,658</b>	<b>8,758</b>	<b>51,354</b>	<b>73,770</b>
<b>Changes in Taxpayers' Equity 2013/2014</b>				
Total comprehensive income for the year	-	591	8,355	8,946
Depreciation transfer	-	(275)	275	-
<b>Balance at 31 March 2014</b>	<b>13,658</b>	<b>9,074</b>	<b>59,984</b>	<b>82,716</b>

Authority	General reserve £k	Revaluation reserve £k	Retained earnings £k	Total £k
Balance at 1 April 2012	13,658	8,870	40,192	62,720
<b>Changes in Taxpayers' Equity 2012/2013</b>				
Total comprehensive income for the year	-	187	2,454	2,641
Depreciation transfer	-	(299)	299	-
<b>Balance at 31 March 2013</b>	<b>13,658</b>	<b>8,758</b>	<b>42,945</b>	<b>65,361</b>
<b>Changes in Taxpayers' Equity 2013/14</b>				
Total comprehensive income for the year	-	591	8,690	9,281
Depreciation transfer	-	(275)	275	-
<b>Balance at 31 March 2014</b>	<b>13,658</b>	<b>9,074</b>	<b>51,910</b>	<b>74,642</b>

# Notes to the Financial Statements

## 1 General information

The Authority is an NDPB and was established by the Atomic Energy Authority Act 1954. The address of the Authority's registered office is Culham Science Centre, Abingdon, Oxfordshire, OX14 3DB. Its sponsoring government department is the Department for Business, Innovation and Skills. The Authority and its subsidiaries are referred to as "the Group".

The Accounting Officer authorised these financial statements for issue on 30th June 2014.

## 2 Basis of preparation

The financial statements comply with the provisions of the Atomic Energy Authority Act 1954 and the Accounts Direction issued by HM Treasury. The latter requires the financial statements to be prepared in accordance with the Government Financial Reporting Manual (FRoM) issued by HM Treasury as updated annually. The accounting policies contained in the FRoM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector. Where the FRoM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the Group for the purpose of giving a true and fair view has been selected.

The financial statements have been prepared on a going concern basis. The Authority relies on funding from the European Commission to finance the operation of the JET programme. A new contract between the Authority and the Commission for the operation of JET, signed in June 2014 and backdated to 1 January 2014, covers a five year period to 31st December 2018. The Directors therefore believe that the commitment of Europe to fusion research evidenced by the contract, and the acceptance by BIS of responsibility for costs associated with Authority site restoration and restructuring liabilities, are sufficient to support continuing operations for the foreseeable future.

The financial statements are presented in pounds sterling, which is the Authority's functional currency, and have been prepared under the historical cost convention, except for land and buildings, investment properties, assets held-for-sale and derivative financial instruments which are stated at fair value.

The preparation of financial statements in conformity with IFRS requires judgements, estimates and assumptions to be made that affect the application of accounting policies and the reported amounts of income, expenses, assets and liabilities. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected. Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the consolidated financial statements is included in the notes to the financial statements.

## 3 Significant accounting policies

The principal accounting policies applied by the Authority in the preparation of these financial statements are set out below. These policies have been applied consistently in dealing with all items that are considered material to the financial statements.

### 3.1 Consolidation

#### (a) Subsidiaries

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from activities and actually exercises this power. In assessing control, potential voting rights that are currently exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries are changed when necessary to align them with the policies adopted by the Group.

#### (b) Joint ventures

Joint ventures are those entities over which the Group exercises joint control through a contractual arrangement. The results, assets and liabilities of joint ventures are incorporated in the consolidated financial statements using the equity method of accounting. Investments in joint ventures are initially carried in the statement of financial position at cost and subsequently adjusted by post-acquisition changes in the Group's share of the net assets of the joint venture, less any impairment in the value of individual investments. Losses of joint ventures in excess of the Group's interest in those joint ventures are not recognised, except where the Group has made a commitment to make good those losses.

#### (c) Transactions eliminated on consolidation

Inter-group transactions, balances and unrealised gains and losses on transactions between Group companies are eliminated on consolidation.



### 3.2 Revenue recognition

Revenue is recognised when the amount can be reliably measured, it is probable that future economic benefits will be received and when specific criteria have been met as described below. The amount of revenue is not considered to be reliably measurable until all contingencies relating to the sale have been resolved. Revenue is shown net of value added tax, returns, rebates and discounts.

#### (a) Service contracts

Revenue from cost recovery contracts for managing the UK's fusion research programme and the European Union's JET facility is recognised to the extent of costs incurred in the period that are expected to be recoverable from customers.

Revenue from other service contracts is recognised under the percentage-of-completion method. Revenue is generally recognised based on the services performed to date as a percentage of the total services to be performed. If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known.

#### (b) Rental income

Rental income from investment properties is recognised in the statement of comprehensive income on a straight-line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income over the term of the lease.

#### (c) Grant-in-aid

Grant-in-aid relating to revenue expenditure is recognised in the statement of comprehensive income in the same period as the related expenditure that it is intended to fund.

This departure from the specified treatment in the FReM has been agreed with HM Treasury.

### 3.3 Research expenditure

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the statement of comprehensive income when incurred.

### 3.4 Employee benefits

#### (a) Short-term employee benefits

Short-term employee benefits are recognised in the year in which the related service is provided. A liability is recognised for the amount expected to be paid under short-term bonus arrangements if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by employees and the obligation can be estimated reliably.

#### (b) Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the reporting date are discounted to their present value.

#### (c) Retirement benefits

Obligations for contributions to defined contribution schemes are recognised as an expense when they are due. The Group has no further payment obligations once the contributions have been paid.

The Group operates three defined benefit schemes for the benefit of its employees. Two of these are closed to new members. The schemes are unfunded multi-employer defined benefit schemes. In accordance with the FReM, these schemes are accounted for as defined contribution schemes in these financial statements and the obligations recognised are limited to the contributions due.

The Group also has a separate liability in respect of unfunded retirement benefits relating to three individuals. The liability recognised in the statement of financial position is the present value of the defined benefit obligation at the reporting date, together with adjustments for unrecognised past-service costs. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using a real rate of interest set by HM Treasury. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in the period in which they arise.



# Notes to the Financial Statements

## 3.5 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Authority Board.

## 3.6 Foreign currency translation

Transactions in foreign currencies are translated to the functional currency of the Group using the exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency using the exchange rates at that date. Foreign exchange gains and losses resulting from the settlement of transactions and from the translation of monetary assets and liabilities are recognised in the statement of comprehensive income except when deferred in taxpayers' equity as qualifying cash flow hedges.

## 3.7 Property, plant and equipment

Land and buildings are occupied by the Group and are shown at fair value, based on periodic, but at least quinquennial, valuations by external independent valuers, less subsequent depreciation for buildings. In the intervening years, these valuations may be updated by the Group with the assistance of independent advice as required. Fair value is based on market values for existing use as there are no alternative uses for the land and buildings.

Increases in the carrying amount arising on revaluation of land and buildings are credited to the revaluation reserve. Decreases that offset previous increases of the same asset are charged against the revaluation reserve; all other decreases are charged to the statement of comprehensive income. Each year the difference between depreciation based on the revalued carrying amount of the asset charged to the income statement and depreciation based on the asset's original cost is transferred from the revaluation reserve to retained earnings.

In accordance with the FReM, other classes of property, plant and equipment with short useful lives or low book values are stated at historical cost less depreciation as a proxy for current valuations. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the statement of comprehensive income during the financial period in which they are incurred.

Land is not depreciated. Assets under construction are not depreciated until they are in use. Depreciation on other assets is calculated using the straight-line method to allocate their cost or revalued amounts to their residual values over their estimated useful lives, as follows:

- Buildings up to 40 years
- Plant, machinery and equipment up to 10 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each reporting date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (Note 3.11).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and any amounts to be released from deferred income on disposal and are recognised in the statement of comprehensive income. When revalued assets are sold, any amounts included in the revaluation reserve are transferred to retained earnings.

## 3.8 Investment property

Investment property, comprising freehold land and buildings, is held either for rental yields or capital appreciation and is not occupied by the Group. Investment property is carried at fair value, representing open market value determined annually by external independent valuers.

Fair value is based on active market prices, adjusted, if necessary, for any difference in the nature, location or condition of the specific asset. In the absence of current prices in an active market, the valuations are prepared by considering the aggregate of the estimated cash flows expected to be received from renting out the property. Valuations reflect the allocation of maintenance and insurance responsibilities between the Group and the lessee and the remaining economic life of the property.

Changes in fair values are recognised in the statement of comprehensive income.



### **3.9 Intangible assets**

Intangible assets comprise acquired computer software licences and are stated at cost, net of amortisation and any provision for impairment. The cost of intangible assets, less estimated residual value, is amortised on a straight line basis over their estimated useful lives of up to five years.

### **3.10 Non-current assets held for sale**

Non-current assets are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell if their carrying amount is to be recovered principally through a sale transaction rather than through continuing use.

### **3.11 Impairment of non-financial assets**

Assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows. Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

### **3.12 Inventories**

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out method. The cost of work in progress comprises raw materials, direct labour, other direct costs and related production overheads. Net realisable value is the estimated selling price in the ordinary course of business, less applicable selling expenses.

### **3.13 Cash and cash equivalents**

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with original maturities of three months or less.

### **3.14 Current and deferred income tax**

The tax credit for the period comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised directly in equity. In this case, the tax is also recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantially enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the reporting date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

### **3.15 Provisions**

Provisions are recognised when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using real rates of interest. The increase in the provision due to passage of time is recognised as finance expense.

Where assurances have been received from another party that they will reimburse some or all of the expenditure required to settle a provision, a reimbursement asset will be recognised to the extent of the amount expected to be reimbursed. The reimbursement asset is shown separately from the related provision in the statement of financial position.



# Notes to the Financial Statements

## 3.16 Financial instruments

### (a) Non-derivative financial instruments

Non-derivative financial instruments comprise trade and other receivables, investments, cash and cash equivalents and trade and other payables and are recognised initially at fair value. Subsequent to initial recognition, non-derivative financial instruments are measured as described below.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the reporting date which are classified as non-current assets. The carrying values, less impairment provision, of loans and receivables are assumed to approximate their fair values.

Other financial liabilities are non-derivative financial instruments with fixed or determinable payments that are not quoted in an active market. They are included in current liabilities, except for maturities greater than 12 months after the reporting date which are classified as non-current liabilities. The carrying values of other financial liabilities are assumed to approximate their fair values.

### (b) Derivative financial instruments

Derivative financial instruments comprise financial instruments held to hedge foreign currency risk exposures and embedded derivatives in host contracts. Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument.

Financial instruments held to hedge foreign currency risk exposures are designated as cash flow hedges if the criteria for applying hedge accounting under IAS 39 are met. The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in equity. The gain or loss relating to the ineffective portion is recognised immediately in the statement of comprehensive income. Amounts accumulated in equity are recycled in the statement of comprehensive income in the periods when the hedged item affects profit or loss.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the statement of comprehensive income. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the statement of comprehensive income.

If the criteria for applying hedge accounting are not met, the gain or loss on derivative financial instruments is credited or charged to the statement of comprehensive income instead of being deferred in equity.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related. Changes in the fair value of separable embedded derivatives are recognised immediately in the statement of comprehensive income.

## 3.17 Operating leases

Payments made under operating leases are recognised in the statement of comprehensive income on a straight-line basis over the term of the lease. Lease incentives are recognised as an integral part of the total lease expense over the term of the lease.

## 3.18 New and Amended Accounting Standards

Certain new standards, amendments and interpretations to existing standards have been published but are not effective on the Authority's accounting period.

The following new standards, amendments and interpretations to existing standards are not yet effective and have not been early adopted by the Authority:

- IAS 27 Separate Financial Statements – effective date 1 January 2014
- IAS 28 Investments in Associates and Joint Ventures – effective date 1 January 2014
- IFRS 9 Financial Instruments – no mandatory effective date
- IFRS 10 Consolidated Financial Statements – effective date 1 January 2014 (EU adopted).
- IFRS 11 Joint Arrangements – effective date 1 January 2014 (EU adopted)



- IFRS 12 Disclosure of Interests in Other Entities – effective date 1 January 2014 (EU adopted)
- IFRS 13 Fair Value Measurement (new) – effective date 1 January 2013
- IFRS 17 Replacement-leases – effective date 1 January 2015 (EU adopted)
- IFRS 18 Replacement – Revenue Recognition and Liabilities Recognition – effective date 1 January 2015

The Board anticipate that the adoption of these standards and interpretations in future periods will have no material impact on the financial statements of the Authority.

#### **4 Financial Risk Management**

Due to the nature of its activities, the Group is not exposed to the same degree of financial risk faced by other business entities. Financial instruments play a much more limited role in creating or changing risk and generally financial assets and liabilities are generated from day-to-day operational activities and not held to change the risks facing the Group in undertaking its activities. While the Group has significant financial liabilities relating to decommissioning and restructuring, most of the risks attached to these liabilities do not rest with the Group as they are broadly matched by reimbursement assets.

##### **(a) Foreign exchange risk**

Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the Group's functional currency. The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the euro. To manage foreign exchange risk, the Group may use forward contracts for the purchase or sale of foreign currencies.

##### **(b) Interest rate risk**

As the Group has no borrowings or significant interest-bearing assets, the Group's income and operating cash flows are substantially independent of changes in market interest rates. Cash balances on deposit are held in highly rated fixed term deposits and the exposure to interest rate risk is minimal and appropriately managed.

##### **(c) Credit risk**

The Group's income is received primarily from public sector bodies in the UK and Europe and the exposure to credit risk is therefore considered to be low.

##### **(d) Liquidity risk**

The Group is primarily financed by income from other public sector bodies, in the UK and in Europe. Uncertainties about the timing and amount of some of this income, particularly income from Europe, expose the Group to liquidity risk. The Group has a facility to request temporary working capital funding from the Department for Business, Innovation and Skills should the need arise.

#### **5 Segment information**

As the majority of the Group's activities do not represent the provision of public services, segment information in accordance with IFRS 8 is included in these financial statements and the fees and charges analysis required by the FReM is not disclosed.

##### **5.1 Reportable segments**

The Group has two reportable segments, as described below, which are the Group's main business areas reported to the Authority Board. The business areas offer different services and are managed separately because they require different strategies and have different funding streams.

The following summary describes the operations in each of the Group's reportable segments:

- (a) Fusion research – research into using fusion to create a new source of energy that is safe and environmentally benign
- (b) Property management – management and development of the Culham and Harwell campuses for future scientific use.

Other segments include grant-in-aid funding and insurance. None of these segments meets any of the quantitative thresholds for determining reportable segments in 2014 or 2013. The results of these segments are included in the "other" column in the segmental analyses below.

# Notes to the Financial Statements

The segment information for the reportable segments for the years ended 31 March 2014 and 31 March 2013 is as follows:

	Fusion research £k	Property management £k	Other £k	Total £k
<b>Year ended 31 March 2014</b>				
External segment revenue	90,022	4,259	4,781	99,062
Less: share of revenue of joint venture	–	(461)	–	(461)
Other income	190	–	–	190
Expenditure	(90,212)	(3,798)	(4,457)	(98,467)
Investment property revaluation	–	8,187	–	8,187
Operating profit/(loss)	–	8,187	324	8,511
Finance income	135	–	149	284
Finance expense	–	–	(184)	(184)
Share of profits (loss) of joint venture	–	(132)	–	(132)
Profit/(loss) before income tax	135	8,055	289	8,479
<b>Year ended 31 March 2013</b>				
External segment revenue	84,838	4,966	5,224	95,028
Less: share of revenue of joint venture	–	(344)	–	(344)
Other income	18	–	–	18
Expenditure	(84,856)	(4,146)	(4,844)	(93,846)
Operating profit/(loss)	–	476	380	856
Finance income	251	–	228	479
Finance expense	–	–	(258)	(258)
Share of profits (loss) of joint venture	–	(119)	–	(119)
Profit/(loss) before income tax	251	357	350	958

Revenue from external parties is measured in a manner consistent with that in the statement of comprehensive income.

## 5.2 Reconciliation between Reportable Segments and Statement of Comprehensive Income

	2014 £k	2013 £k
<b>Revenues</b>		
Total revenue for reportable segments	94,281	89,804
Other revenue	4,781	5,224
Consolidated revenue per Statement of Comprehensive Income	<b>99,062</b>	<b>95,028</b>
<b>Profit or loss</b>		
Total profit or loss for reportable segments	8,190	608
Other profit or loss	289	350
Consolidated profit before income tax per Statement of Comprehensive Income	<b>8,479</b>	<b>958</b>

## 5.3 Geographical segments

In presenting information on the basis of geographical segments, segment revenue is based on the geographical location of customers.

Group	Revenue	
	2014 £k	2013 £k
United Kingdom	37,195	31,932
Europe	61,780	63,019
Rest of the world	87	77
	<b>99,062</b>	<b>95,028</b>

## 5.4 Revenue from major customers

	2014 £k	2013 £k
European Commission	60,555	61,791

Revenue from the European Commission is attributable to the fusion research segment.

# Notes to the Financial Statements

## 6 Staff Numbers and Related Costs

Staff costs comprise:

	2014 £k	2013 £k
Permanently employed staff:		
Salaries, bonuses and allowances	25,419	22,661
Social security costs	2,336	2,044
Pension costs – defined contribution plans (see Note 22a)	3,563	3,174
	<b>31,318</b>	<b>27,879</b>
Other staff	18,508	15,773
	<b>49,826</b>	<b>43,652</b>

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

	2014	2013
Directly employed	585	537
Other staff	413	370
	<b>998</b>	<b>907</b>

## Exit packages paid to employees

Exit package cost band	Number of compulsory redundancies		Number of other departures agreed		Total number of exit packages by cost band	
	2013/14	2012/13	2013/14	2012/13	2013/14	2012/13
< £10,000	–	–	1	–	1	–
£10,000 - £25,000	–	–	1	(4)	1	(4)
£25,000 - £50,000	–	–	–	(6)	–	(6)
£50,000 - £100,000	–	–	–	(6)	–	(6)
£100,000 - £150,000	–	–	–	(1)	–	(1)
£150,000 - £200,000	–	–	1	(1)	1	(1)
£200,000 - £250,000	–	–	–	(1)	–	(1)
£250,000 - £300,000	–	–	–	(2)	–	(2)
£300,000 - £350,000	–	–	–	(1)	–	(1)
£350,000 - £400,000	–	–	–	–	–	–
£400,000 - £450,000	–	–	–	–	–	–
£450,000 - £500,000	–	–	–	–	–	–
Total number of exit packages	–	–	3	(22)	3	(22)
Total resource cost £	–	–	172,927	(2,021,548)	172,297	(2,021,548)

The majority of the departure costs disclosed above relate to voluntary early release costs paid in accordance with redundancy terms set out in the Authority's Conditions of Employment Manual. There was one exception, which was separately approved. Exit costs are accounted for in full in the year of departure. Where applicable, the additional costs of early releases are met by the Authority and not by the Authority's Combined Pension Scheme (CPS). Ill-health retirement costs are met by the CPS and are not included in the table.

## 7 Operating profit

Operating profit has been arrived at after charging/(crediting):

	2014 £k	20132 £k
Change in fair value of investment property	(8,187)	(476)
Net foreign exchange losses (gains)	128	43
Operating lease rentals – plant and machinery	157	143
Non-cash items:		
– Depreciation	565	409
– Amortisation	5	6

## 8 Auditor's remuneration

The total remuneration of the Group's auditor, National Audit Office, for services provided to the Group was:

	2014 £k	2013 £k
<b>Audit fees</b>		
Authority	46	46
Authority pension schemes	23	23
	69	69
Other services	–	–
	<b>69</b>	<b>69</b>

## 9 Finance income and expense

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
<b>Income</b>				
Interest on term bank deposits	284	479	135	251
<b>Expense</b>				
Revalorisation of provisions:				
– Unwinding of discount on provisions	5,366	4,316	5,366	4,316
– Escalation of reimbursement receivables (Note 21)	(5,253)	(4,136)	(5,253)	(4,136)
Interest on unfunded retirement benefits	71	78	71	78
	<b>184</b>	<b>258</b>	<b>184</b>	<b>258</b>

# Notes to the Financial Statements

## 10 Analysis of Net Expenditure by Programme and Administration Budget

	Programme £k	2014 Admin £k	Total £k	Programme £k	2013 Admin £k	Total £k
<b>Income</b>						
Income from activities	94,346	4,716	99,062	90,918	4,110	95,028
Other income	190	–	190	18	–	18
Interest receivable	284	–	284	479	–	479
Share of revenue of joint venture	(461)	–	(461)	(344)	–	(344)
Share of profit (loss) of joint venture	(132)	–	(132)	(119)	–	(119)
	94,227	4,716	98,943	90,952	4,110	95,062
<b>Expenditure</b>						
Raw Materials and Consumables	17,889	130	18,019	17,355	–	17,355
Other External Expense net of costs capitalised	18,310	906	19,216	19,759	934	20,693
Staff costs	46,180	3,646	49,826	40,364	3,288	43,652
Other expense	2,409	240	2,649	11,624	107	11,731
Non-cash items:						
– Depreciation	561	4	565	398	11	409
– Amortisation	5	–	5	6	–	6
Finance expense	184	–	184	258	–	258
	85,538	4,926	90,464	89,764	4,340	94,104
<b>Net Expenditure after Interest and before tax</b>	(8,689)	210	(8,479)	(1,188)	230	(958)

## 11 Income tax (expense)/credit

	Group and Authority	
	2014 £k	2013 £k
<b>Current tax</b>		
Current tax credit (debit)	–	1,609
<b>Deferred tax</b>		
Origination and reversal of temporary differences	(798)	166
<b>Income tax credit (debit)</b>	<b>(798)</b>	<b>1,775</b>
Share of income tax of joint venture	–	–
<b>Total income tax (expense)/credit</b>	<b>(798)</b>	<b>1,775</b>

The current tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

	2014 £k	2013 £k
Profit for the year	7,681	2,733
Income tax expense/(credit)	798	(1,775)
Profit excluding income tax	8,479	958
Tax calculated at the standard UK corporation tax rate of 23% (2013 – 24%)	1,950	258
Tax effects of:		
– Reversal of timing differences	(10)	95
– Expenses not deductible	357	(99)
– Enhanced relief for research and development expenditure	(2,567)	(186)
– Tax losses for which no deferred income tax asset was recognised	270	(68)
– Income tax credit for previous years	–	(1,609)
<b>Current tax expense (credit) for the year</b>	<b>–</b>	<b>(1,609)</b>

The income tax charged/(credited) to equity during the year is as follows:

	2014 £k	2013 £k
Fair value gains on property, plant and equipment	(339)	(187)

# Notes to the Financial Statements

## 12 Property, plant and equipment

### Group and Authority

	Land £k	Buildings £k	Plant and equipment £k	Assets under construction £k	Total £k
<b>Cost or valuation</b>					
At 1 April 2012	6,942	7,586	3,026	7,473	25,027
Additions	–	–	1,636	–	1,636
Disposals	–	–	–	–	–
Revaluation	–	–	–	–	–
<b>At 31 March 2013</b>	<b>6,942</b>	<b>7,586</b>	<b>4,662</b>	<b>7,473</b>	<b>26,663</b>
Additions	–	–	485	738	1,223
Disposals	–	–	(297)	–	(297)
Revaluation	10	242	–	–	252
<b>At 31 March 2014</b>	<b>6,952</b>	<b>7,828</b>	<b>4,850</b>	<b>8,211</b>	<b>27,841</b>
<b>Depreciation and impairment</b>					
At 1 April 2012	–	1,952	2,625	–	4,577
Depreciation charge	–	331	78	–	409
Disposals	–	–	–	–	–
<b>At 31 March 2013</b>	<b>–</b>	<b>2,283</b>	<b>2,703</b>	<b>–</b>	<b>4,986</b>
Depreciation charge	–	331	234	–	565
Disposals	–	–	(297)	–	(297)
<b>At 31 March 2014</b>	<b>–</b>	<b>2,614</b>	<b>2,640</b>	<b>–</b>	<b>5,254</b>
<b>Net book value</b>					
<b>At 31 March 2013</b>	<b>6,942</b>	<b>5,303</b>	<b>1,959</b>	<b>7,473</b>	<b>21,677</b>
<b>At 31 March 2014</b>	<b>6,952</b>	<b>5,214</b>	<b>2,210</b>	<b>8,211</b>	<b>22,587</b>

All property, plant and equipment is owned by the Group.

There was £17k capital expenditure contracted for at the reporting date but not recognised in the financial statements. (2013 – £62k).



### 13 Investment property

	Group and Authority	
	2014 £k	2013 £k
At 1 April	39,318	38,842
Change in fair value	8,187	476
<b>At 31 March</b>	<b>47,505</b>	<b>39,318</b>

Investment properties were valued at fair value at 28 February 2014 by independent valuers. The valuations were undertaken by GVA in accordance with the Valuation Standards of the Royal Institute of Chartered Surveyors, IFRS and guidelines in HM Treasury's FReM. The Group has adopted this valuation at the reporting date on the grounds that there were no material changes between the valuation date and the reporting date.

The change in fair value in 2014 mainly relates to Harwell, where land has been revalued under the terms of the new Partnership Agreement following the recent change of private sector partner (note 14).

Investment properties are held for their investment potential. Rental income from tenants outside the Group is negotiated at arm's length. The following amounts have been recognised in the income statement:

	Group and Authority	
	2014 £k	2013 £k
Rental income	2,055	2,021
Direct operating expenses:		
– Investment properties that generated rental income	1,736	1,651
– Investment properties that did not generate rental income	298	249

### 14 Financial Assets

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
<b>Non-current</b>				
At 1 April	9,802	2,467	13,049	5,731
Additions	1,178	7,335	474	7,318
<b>At 31 March</b>	<b>10,980</b>	<b>9,802</b>	<b>13,523</b>	<b>13,049</b>
Investment in subsidiary undertakings	–	–	3,000	3,000
Investment in joint venture	10,980	9,802	10,523	10,049
	<b>10,980</b>	<b>9,802</b>	<b>13,523</b>	<b>13,049</b>
<b>Current</b>				
Term bank deposits	8,574	9,705	–	–

# Notes to the Financial Statements

## a) Investment in subsidiary undertakings

Name	Country of incorporation	Ownership interest %	
		2014	2013
AEA Insurance Limited	Isle of Man	100	100

All subsidiary undertakings are included in the consolidation. The proportion of voting rights in the subsidiary undertakings held directly by the Group does not differ from the proportion of shares held.

## b) Investment in joint venture

The Group has a 50% interest in a joint venture, Harwell Science and Innovation Campus Public Sector Limited Partnership, the public sector partner in Harwell Oxford, which is responsible for the development of the Harwell Oxford Campus. The interest in the joint venture is accounted for using the equity method in the Group financial statements.

	Group	
	2014 £k	2013 £k
At 1 April	9,802	2,467
Share of profits/(loss) net of tax	(132)	(119)
Additions	1,310	7,454
<b>At 31 March</b>	<b>10,980</b>	<b>9,802</b>
Analysed as follows:		
Cost or valuation	11,699	9,921
Share of retained profits/(losses)	(719)	(119)
	<b>10,980</b>	<b>9,802</b>

The following amounts represent the Group's share of the income, results, assets and liabilities of the joint venture. They are included in the Statement of Comprehensive Net Income and Statement of Financial Position:

	2014 £k	2013 £k
<b>Profit/(loss) net of tax</b>		
Income	245	346
Expenses	(377)	(465)
	(132)	(119)
<b>Assets</b>		
Current assets	9,516	6,968
Non-current assets	5,474	5,318
	14,990	12,286
<b>Liabilities</b>		
Current liabilities	1,553	419
Non-current liabilities	2,457	2,065
	4,010	2,484
<b>Net assets</b>	<b>10,980</b>	<b>9,802</b>

There are no contingent liabilities relating to the Group's interest in the joint venture, and no significant contingent liabilities of the venture itself.

#### **(c) Term bank deposits**

Term bank deposits are held with major UK banks. The average interest rate on the deposits held at 31 March 2014 was 1.15% (2013 – 1.52%). The credit risk associated with these investments is considered to be low because of the size and status of the banks involved.

#### **15 Financial instruments by category**

All financial assets of the Group and the Authority were categorised as loans and receivables at both 31 March 2014 and 31 March 2013. All financial liabilities of the Group and the Authority were categorised as other financial liabilities at both 31 March 2014 and 31 March 2013.

The majority of financial instruments relate to contracts to buy non-financial items in line with the Authority's expected purchase and usage requirements and the Authority is therefore exposed to little credit, liquidity or market risk.

# Notes to the Financial Statements

## 16 Trade receivables, financial and other current assets

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
<b>Amounts falling due after more than one year</b>				
Reimbursement receivables (Note 21):				
– Site restoration	241,829	234,940	241,829	234,940
– Restructuring	10,788	12,642	10,788	12,642
Other receivables	796	59	796	59
	<b>253,413</b>	<b>247,641</b>	<b>253,413</b>	<b>247,641</b>

### Amounts falling due within one year

Trade receivables	3,306	2,747	3,306	2,747
Reimbursement receivables (Note 21):				
– Site restoration	46	83	46	83
– Restructuring	3,943	4,054	3,943	4,054
Prepayments and accrued income	15,571	5,879	15,532	5,816
VAT	1,043	711	1,043	711
Corporation Tax receivable (note 11)	–	1,609	–	1,609
Other receivables	87	17	497	126
	<b>23,996</b>	<b>15,100</b>	<b>24,367</b>	<b>15,146</b>

There are no impaired assets in any of the classes of trade and other receivables. Accrued income from the European Union was £11,858k.

Receivables can be analysed as follows:

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
<b>Amounts falling due after more than one year</b>				
Other Central Government bodies	252,094	246,805	252,094	246,805
Bodies external to Government	1,319	836	1,319	836
	<b>253,413</b>	<b>247,641</b>	<b>253,413</b>	<b>247,641</b>

### Amounts falling due within one year

Other Central Government bodies	5,919	6,477	5,919	6,477
Local authorities	–	194	–	194
Bodies external to Government	18,077	8,429	18,448	8,475
	<b>23,996</b>	<b>15,100</b>	<b>24,367</b>	<b>15,146</b>

## 17 Cash and cash equivalents

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
Balance at 1 April	38,949	53,577	35,418	50,027
Net change in cash and cash equivalent balances	(8,630)	(14,628)	(8,589)	(14,609)
<b>Balance at 31 March</b>	<b>30,319</b>	<b>38,949</b>	<b>26,829</b>	<b>35,418</b>

The following balances at 31 March were held at:

Commercial banks and cash in hand	30,319	8,949	26,829	5,418
Short term investments	–	30,000	–	30,000
<b>Balance at 31 March</b>	<b>30,319</b>	<b>38,949</b>	<b>26,829</b>	<b>35,418</b>

## 18 Trade payables and other current liabilities

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
<b>Amounts falling due after more than one year</b>				
Payments received on account	94	94	94	94
<b>Amounts falling due within one year</b>				
Trade payables	1,719	2,317	1,719	2,317
Accrued costs	5,518	9,313	5,508	9,306
Payments received on account	18,574	23,376	18,574	23,376
Social security and other taxes	704	680	704	680
Other payables	2,404	2,432	2,401	2,429
	<b>28,919</b>	<b>38,118</b>	<b>28,906</b>	<b>38,108</b>

Payables can be analysed as follows:

### Amounts falling due within one year

	Group		Authority	
	2014 £k	2013 £k	2014 £k	2013 £k
Other Central Government bodies	12,988	5,386	12,988	5,386
Bodies external to Government	15,931	32,732	15,918	32,722
	<b>28,919</b>	<b>38,118</b>	<b>28,906</b>	<b>38,108</b>

There were no payables with Government bodies falling due after more than one year.

# Notes to the Financial Statements

## 19 Deferred income

Deferred income received in 2014 relates to capital grants for the purchase of equipment for the Materials Research Facility which is to be established on the Culham site.

	Group and Authority	
	2014 £k	2013 £k
At 1 April	1,431	60
Deferred income received	759	1,389
Released to income statement	(160)	(18)
<b>As at 31 March</b>	<b>2,030</b>	<b>1,431</b>

## 20 Deferred income tax

Group and Authority	Investment property £k	Land and buildings £k	Total £k
At 1 April 2012	6,605	2,660	9,265
Income statement debit/(credit)	(166)	–	(166)
Charged directly to equity	–	(187)	(187)
<b>At 31 March 2013</b>	<b>6,439</b>	<b>2,473</b>	<b>8,912</b>
Income statement debit/(credit):			
– Revaluation	1,883		1,883
– Disposal	–	–	–
– Effect of change in tax rate	(1,085)	–	(1,085)
Charged directly to equity:			
– Revaluation	–	(14)	(14)
– Effect of change in tax rate	–	(324)	(324)
<b>At 31 March 2014</b>	<b>7,237</b>	<b>2,135</b>	<b>9,372</b>

A change to the UK corporation tax rate from 24% to 23% was substantively enacted on 3 July 2012, with effect from 1 April 2013. The 23% rate has been applied to the deferred tax liability as adjusted for the Authority's property revaluation adjustments at 31st March 2014. Additional reductions to 21% for periods from 1 April 2014 and 20% with effect from 1 April 2015 were announced in the Autumn statement 2012 and the March 2013 budget, and were substantively enacted on 2nd July 2013. The closing deferred tax liability has therefore been recalculated at 20% as the liability will not unwind before 31st March 2015.

Deferred income tax losses are recognised for tax depreciation and tax loss carry-forwards to the extent that the realisation of the related tax benefit through future taxable profits is probable. The Group did not recognise deferred income tax assets of £3,724k (2013 – £4,166k) in respect of tax losses of £18,619k that can be carried forward against future taxable income.

## 21 Provisions for liabilities and charges

Group	Site Restoration £k	Restructuring £k	Other £k	Total £k
At 1 April 2012	188,007	24,050	4,465	216,522
Changes in price levels	6,149	433	5	6,587
Unwinding of discount	4,136	674	–	4,810
Provided in the year	36,766	1,579	606	38,951
Provisions utilised in the year	(35)	(6,233)	(704)	(6,972)
<b>At 31 March 2013</b>	<b>235,023</b>	<b>20,503</b>	<b>4,372</b>	<b>259,898</b>
Changes in price levels	4,804	511	6	5,321
Unwinding of discount	5,253	482	–	5,735
Provided in the year	–	1,623	10,579	12,202
Provisions not required written back	(3,179)	–	(470)	(3,649)
Provisions utilised in the year	(25)	(4,657)	(554)	(5,236)
<b>At 31 March 2014</b>	<b>241,876</b>	<b>18,462</b>	<b>13,933</b>	<b>274,271</b>
<b>At 31 March 2013</b>				
Non-current	234,940	15,832	2,546	253,318
Current	83	4,671	1,826	6,580
	<b>235,023</b>	<b>20,503</b>	<b>4,372</b>	<b>259,898</b>
<b>At 31 March 2014</b>				
Non-current	241,830	14,069	11,692	267,591
Current	46	4,393	2,241	6,680
	<b>241,876</b>	<b>18,462</b>	<b>13,933</b>	<b>274,271</b>

# Notes to the Financial Statements

## 21 Provisions for liabilities and charges continued

Authority	Site Restoration £k	Restructuring £k	Other £k	Total £k
At 1 April 2012	188,007	24,050	2,868	214,925
Changes in price levels	6,149	433	5	6,587
Unwinding of discount	4,136	674	–	4,810
Provided in the year	36,766	1,579	679	39,024
Provisions utilised in the year	(35)	(6,233)	(704)	(6,972)
<b>At 31 March 2013</b>	<b>235,023</b>	<b>20,503</b>	<b>2,848</b>	<b>258,374</b>
Changes in price levels	4,804	511	6	5,321
Unwinding of discount	5,253	482	–	5,735
Provided in the year	–	1,623	10,579	12,202
Provisions not required written back	(3,179)	–	(10)	(3,189)
Provisions utilised in the year	(25)	(4,657)	(554)	(5,236)
<b>At 31 March 2014</b>	<b>241,876</b>	<b>18,462</b>	<b>12,869</b>	<b>273,207</b>
<b>At 31 March 2013</b>				
Non-current	234,940	15,832	2,327	253,099
Current	83	4,671	521	5,275
	<b>235,023</b>	<b>20,503</b>	<b>2,848</b>	<b>258,374</b>
<b>At 31 March 2014</b>				
Non-current	241,830	14,069	11,462	267,361
Current	46	4,393	1,407	5,846
	<b>241,876</b>	<b>18,462</b>	<b>12,869</b>	<b>273,207</b>

### (a) Site restoration

The decommissioning provision represents the estimated costs of decommissioning fusion research facilities at the Authority's Culham site, including the storage, processing and eventual disposal of radioactive wastes.

Calculation of the liabilities is based on the technical assessments of the processes and methods likely to be used in the future to carry out the work. Estimates are derived from the latest technical knowledge and commercial information available, taking into account current legislation, regulations and Government policy. Summary figures are built up by aggregating detailed estimates for individual liabilities. Allowance is also made for infrastructure costs, which are an appropriate share of site running costs and other overhead costs attributable to plant and buildings. The calculation is reassessed annually.

The best estimate of the cost of dealing with the liabilities at 31 March 2014 is discounted at rates advised by HM Treasury to the reporting date. The rates now applied are:





	<b>Rate</b>
	%
Short term – 0 to 5 years from the date of the Statement of Financial Position (SFP)	-1.9
Medium term – after 5 and up to 10 years from the date of the SFP	-0.65
Long term – over 10 years from the date of the SFP	2.2

The provision is expressed in 2013/14 money values using an inflation rate of 2% to uplift the provision from 2012/13 values. The analysis of expected timing of discounted flows is as follows:

	<b>Group and Authority</b>	
	<b>2014</b>	<b>2013</b>
	<b>£k</b>	<b>£k</b>
Not later than one year	46	83
Later than one year and not later than five years	19,091	4,214
Later than five years	222,739	230,726
	<b>241,876</b>	<b>235,023</b>

The best estimate of the undiscounted cost of dealing with the liabilities is £254,822k (2013 - £249,908k).

A letter issued by the then Secretary of State for Energy in 1986 stated that the Government was prepared to continue to accept responsibility in principle for those costs which the Authority incurs in treating and disposing of nuclear wastes and in decommissioning plant arising from:

- (i) programmes carried out by the Authority and its predecessors prior to 1 April 1986; and
- (ii) programme agreement work undertaken for BIS and its predecessors after 1 April 1986.

These assurances were reconfirmed by BIS in May 2014. On the basis of these assurances a matching receivable is included in the statement of financial position.

Since much of the work required to deal with the liabilities will not be undertaken until well into the future, there is a significant uncertainty as to the amount of the provision and the associated receivable due from BIS. This significant uncertainty does not impact on either net assets or the net profit reported in the financial statements.

During the reporting period, permanent planning consent was received for a number of buildings for which site restoration costs are included within the provision. This permanent consent eliminated the need for further temporary planning extensions given the extended life of JET. The Authority has carried out a review of the effect of this change on the provision, and concluded that generally the estimate is unchanged, given that there is still an obligation on the Authority to remediate and decommission these buildings. Following the review, one office building, clearly no longer used for JET purposes, has been removed, and four recently constructed power supplies buildings which now have permanent consent have been included. This gives a net increase in discounted costs of £459k, which is not considered material to the overall provision and has therefore not been recognised in the financial statements.

During the year, the Authority also carried out a review of costs associated with new equipment and facilities installed during the JET upgrade that concluded in 2011, and in particular the ITER-like wall, and concluded that the liability for decommissioning these would not be materially different from the estimates included in the provision for the equipment they replaced, which is now being disposed of as operational waste under a separate provision (see note 21c).

The Authority has assessed the impact of the date of JET closure, which is a key variable, on the best estimate recognised in the 2013/14 Annual Accounts. This gives a range of undiscounted and discounted costs (including the best estimate) as follows:

Undiscounted costs - £254,511k to £254,822k (2013 - £249,502k to £249,908k)  
Discounted costs - £227,519k to £241,875k (2013 - £217,999k to £239,640k)

When a later date for JET closure is assumed, the discounted costs are reduced substantially compared with those for earlier closure dates. This is because the Treasury discount rates above increase the discounted value in the earlier years of the phasing, when rates are negative, but reduce it in later years when the rate is positive. Assuming later JET closure moves more decommissioning costs into later years.



# Notes to the Financial Statements

## (b) Restructuring

The restructuring provisions represent termination benefits payable under early retirement arrangements to employees who had retired early, or had accepted early retirement, before 31 March 2014. These benefits continue at least until the date at which the employee would have reached normal retirement age. The restructuring provisions are discounted to the reporting date at the discount rate for pensions liabilities, which is 1.8% in 2013/14. The undiscounted cost of the group provisions is £19,771k (2013 – £22,466k) and the benefits are estimated to be payable over a period up to 30 years.

The analysis of the expected timing of discounted flows is as follows:

	2014 £k	2013 £k
Not later than one year	4,393	4,671
Later than one year and not later than five years	7,984	8,931
Later than five years	6,085	6,901
	<b>18,462</b>	<b>20,503</b>

Part of the expenditure required to settle the restructuring liabilities will be reimbursed by other parties as follows:

- (i) Lump sums paid to employees on early retirement are refundable to the Group from the appropriate pension scheme at or after the date on which the individual concerned would have reached normal retirement age.
- (ii) Assurances covering restructuring provisions made before 1 April 2004 have been received from BIS, and reconfirmed in May 2014, and expenditure related to these provisions is reimbursed by BIS.

On the basis of these reimbursement arrangements, receivables have been included in the statement of financial position.

## (c) Other provisions

The Authority has made a provision of £10,183k relating to the disposal of operational waste arising from its previous contract to operate JET, which ended in December 2013. The provision was discounted at the Treasury rates for general provisions referred to in note 21a) above. The undiscounted cost of the provision is £9,674k. The remaining provisions mainly comprise unfunded retirement benefit obligations (Note 22c) and claims relating to industrial-related injuries.

## 22 Retirement benefits

### (a) Defined benefit schemes

The Group has three defined benefit schemes: the Combined Pension Scheme (CPS), the Principal Non-Industrial Superannuation Scheme (PNISS) and the Protected Persons Superannuation Scheme (PPSS). These schemes have members from other employers as well as the Group. No information in these financial statements relates to other employers participating in the CPS, PNISS or PPSS, although the Group has overall responsibility for the management of the schemes. No contingent liability is expected to arise from this responsibility.

In common with other public sector schemes, the CPS, the PNISS and the PPSS do not have many of the attributes of normal pension schemes. All contributions are paid to and benefits paid by HM Government via the Consolidated Fund. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via the annual Parliamentary vote. The Government does not maintain a separate fund and actuarial valuations are based on a theoretical calculation as to how a typical UK pension scheme would have invested the historical surplus of contributions over payments.

In accordance with the FReM, the schemes are accounted for in these financial statements as defined contribution schemes.

Employer contributions are calculated in accordance with HM Treasury methodology "Superannuation Contributions Adjusted for Past Experience" and are based on the expected cost of members' benefits as they accrue. The total contributions paid by the Group during the year were £3,544k (2013 – £3,155k).

### b) Defined contribution schemes

The Group manages two defined contribution schemes, the Additional Voluntary Contribution (AVC) scheme and the Shift Pay Pension Savings Plan (SPPP) scheme, both of which are fully insured schemes administered by Prudential Assurance Company Ltd to whom contributions are paid.

The AVC scheme includes members from the Group and from other employers who are members of CPS or PPSS and who have opted to pay additional voluntary contributions. No employer contributions are made to this scheme.

The members of the SPPP scheme include shift working employees of the Group and other employers who are members of CPS or PPSS. The costs of the SPPP scheme, which are directly linked to shift pay earnings, are charged to the statement of comprehensive income at the time the shift pay is paid. The total contributions paid by the Group during the year were £17k.

### (c) Unfunded retirement benefits

Three former Authority chief executives have unfunded retirement benefits which are not included in the Authority pension schemes.

The movement in the liability for these benefits is shown below:

	Group and Authority	
	2014 £k	2013 £k
At 1 April	1,764	1,646
Change in discount rate	151	112
Interest on liability	71	78
Benefits payable	(74)	(72)
Actuarial (gain)/loss	11	–
	<b>1,923</b>	<b>1,764</b>

The interest on liability is included in the statement of comprehensive income and the actuarial loss is included in taxpayers' equity. The closing liability, discounted at the appropriate pensions liability discount rate, is included in other provisions for liabilities and charges in the statement of financial position (Note 21).

## 23 Operating leases

### (a) The Group as lessee

Non-cancellable operating lease rentals are payable as follows:

	2014 £k	2013 £k
Not later than one year	160	164
Later than one year and not later than five years	156	321
Later than five years	–	–
	<b>316</b>	<b>485</b>

The Group leases vehicles and office equipment under operating leases.

### (b) The Group as lessor

The Group leases its investment property with lease terms of between 0.5 and 25 years. The leases contain market review clauses in the event that the lessee exercises the option to renew. The lessee does not have an option to purchase the property at the expiry of the lease period.

# Notes to the Financial Statements

The future minimum lease payments under non-cancellable leases are as follows:

	2014 £k	2013 £k
Not later than one year	1,585	1,529
Later than one year and not later than five years	967	2,071
Later than five years	91	104
	<b>2,643</b>	<b>3,704</b>

Rental income received during the year is disclosed in Note 13.

## 24 Related-party transactions

The Authority is an NDPB sponsored by BIS which is regarded as a related party. During the year, the Group had various material transactions with BIS and with other entities for which BIS is regarded as the responsible department, in particular EPSRC. STFC is the Authority's partner in the Harwell Science and Innovation Campus Public Sector Limited Partnership (note 14).

In addition, the Group had various material transactions with other government departments and other central government bodies. Most of these transactions have been with the Civil Nuclear Constabulary.

No Board member, key manager or other related party has undertaken any material transactions with the Group during the year.

## 25 Statutory borrowing limit

During 2013/14, the statutory borrowing limit set by Section 3 of the Atomic Energy Authority Act 1986 as amended by The United Kingdom Atomic Energy Authority (Limit on Borrowing) Order 1991 remained at £200m. There were no borrowings by the Authority during the current or previous year.

## 26 Events after the reporting period date

The new 5-year bilateral JET Operating Contract between the Authority and the European Commission was signed by both parties in June 2014. As noted elsewhere in the Accounts, the contract is backdated to 1st January 2014.

# Glossary

<b>AVC</b>	Additional Voluntary Contribution	<b>IAS</b>	International Accounting Standards
<b>AEAIL</b>	AEA Insurance Ltd	<b>IFRS</b>	International Financial Reporting Standards
<b>Authority</b>	UK Atomic Energy Authority	<b>ITER</b>	Next generation international experimental fusion reactor
<b>BIS</b>	Department for Business Innovation and Skills	<b>JET</b>	Joint European Torus
<b>CRC</b>	Carbon Reduction Commitment Energy Efficiency Scheme	<b>MRF</b>	Materials Research Facility
<b>CETV</b>	Cash Equivalent Transfer Value	<b>MAST</b>	Mega Amp Spherical Tokamak
<b>CIPD</b>	Chartered Institute of Personnel and Development	<b>MoU</b>	Memorandum of understanding
<b>CEO</b>	Chief Executive Officer	<b>NNL</b>	National Nuclear Laboratory
<b>CERN</b>	European Laboratory for Particle Physics	<b>NPL</b>	National Physics Laboratory
<b>CPS</b>	Combined Pension Scheme	<b>NNUF</b>	National Nuclear Users Facility
<b>CCFE</b>	Culham Centre for Fusion Energy	<b>NDPB</b>	Non-Departmental Public Body
<b>DEMO</b>	Demonstration fusion power station	<b>NDA</b>	Nuclear Decommissioning Authority
<b>EPSRC</b>	Engineering and Physical Sciences Research Council	<b>PNISS</b>	Principal Non-Industrial Superannuation Scheme
<b>EA</b>	Environment Agency	<b>RACE</b>	Remote Applications in Challenging Environments facility
<b>EURATOM</b>	European Atomic Energy Community	<b>R&amp;D</b>	Research & Development
<b>EFDA</b>	European Fusion Development Agreement	<b>SIRO</b>	Senior Information Risk Officer
<b>ESA</b>	European Space Agency	<b>STFC</b>	Science & Technology Facilities Council
<b>FReM</b>	Government Financial Reporting Manual	<b>SPPP</b>	Shift Pay Pension Savings Plan
<b>FTE</b>	Full Time Equivalent	<b>TWI</b>	The Welding Institute
<b>F4E</b>	Fusion for Energy		
<b>HSIC PubSp</b>	Public sector partnership for the Harwell joint venture		







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