

# **Nuclear Decommissioning Authority Annual Report & Accounts**

Financial Year: April 2015 to March 2016

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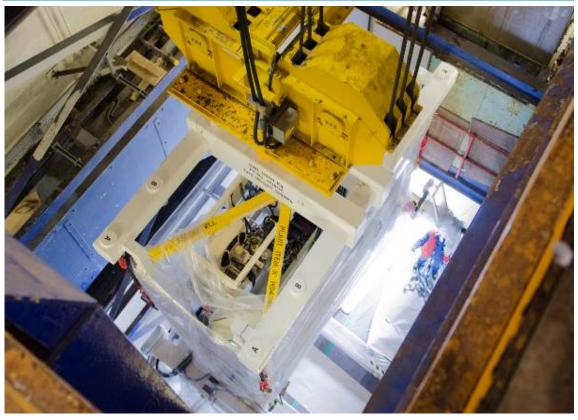
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# Nuclear Decommissioning Authority Annual Report and Accounts 2015/2016

# **Performance Report - Overview**



The arrival of a custom-built machine to scoop the radioactive contents from one of Sellafield's most hazardous buildings (Magnox Swarf Storage Silo).

### **Ministerial Foreword**



It remains a national priority to tackle the UK's historic civil nuclear legacy safely, securely, cost effectively, and in ways that minimise environmental impact and the burden on taxpayers. Through the Spending Review, the Government maintained funding for the NDA at a level that allows it to continue to make progress on delivering its vital mission, with a particular focus on dealing with the highest hazards at Sellafield.

I am particularly pleased to see the progress being made on starting the waste retrievals at some of the oldest facilities on the Sellafield site. I have recently visited the site, and am aware of the particular challenges associated with these legacy facilities. The start of these retrievals signals a real breakthrough in reducing risk and hazard. I hope that the change in management structure at Sellafield will create an opportunity for further improvements to progress at the site, as private sector strategic partners are engaged.

I am also pleased with the progress being made across the NDA's estate, including achieving key milestones at Dounreay in Scotland, and the good progress being made at the Magnox sites.

The NDA provides strong support to the Government in terms of maintaining and growing the skills base and supporting economic growth, including in the supply chain. This is important not only for the decommissioning sector at home and globally, but also for the wider nuclear sector and for the UK's industrial base more generally.

The NDA continues to support Government in the development of policy on an enduring solution to deal with our plutonium inventory, as we explore the business and technical cases for the various options currently under consideration.

The Government also continues to pursue its policy aim of a long-term sustainable solution for the disposal of higher activity waste in a Geological Disposal Facility (GDF), an essential part in both the decommissioning and clean-up programme and for new nuclear power stations. The NDA's wholly owned subsidiary Radioactive Waste Management Ltd is supporting this policy by leading the GDF siting process on behalf of Government.

As the UK's programme for the next generation of new nuclear power plants continues to take shape, it remains important that we demonstrate our commitment to deal with the nuclear legacy facilities and sites. I will continue to challenge the NDA to deliver performance improvements across its estate and to translate Government priorities into on-the-ground action, delivering safe, secure, cost effective and environmentally sound solutions to dealing with the nuclear legacy while providing value for money to the taxpayer.

Andrea Leadsom Minister of State Department of Energy and Climate Change

### Chairman's Statement



In reflecting on the NDA's journey over the last financial year, it seems timely to observe that it has been punctuated by a number of significant transitions and milestones which reflect the progress we have made as well as the work that still lies ahead of us.

In addition to the transitional process of embedding the most significant decision of the previous financial year, namely the change of management model at Sellafield, we are in the early phases of a new government and economic conditions that remain constrained for all public organisations.

Last year's UK Government Spending Review gave us a financial settlement that will enable us to continue the vital work of cleaning up our sites. The settlement was, of course, also an acknowledgement of the NDA's critical role in dealing with some of the UK's most hazardous facilities on behalf of the nation.

We recognise the trust placed in us by this settlement and the additional responsibility to continually challenge ourselves to secure the maximum levels of efficiency, not only from our Site Licence Companies (SLCs) but also from our own activities. As custodians of public funds, we are always committed to seeking efficiencies and are conscious that the latest challenge demands more from all of us. We are nevertheless confident that we will be able to make continued progress on a broad front, working with our SLCs and subsidiaries to set high standards and delivering against them.

As we continue the drive for efficiency, we also need to acknowledge that broader workforce reforms are being introduced by the government through new legislation, affecting all those who are paid from the public purse including staff across our estate and within our own organisation.

We are confident that the new Sellafield Ltd management model will deliver the improvements that we are seeking at our most complex site. The decision to review the options for revised management arrangements reflected the complexity and unique nature of the challenges at Sellafield. We will be monitoring delivery and performance closely as we move through the first stages of a more collaborative and productive relationship.

As we embark on a new phase at Sellafield, we also marked the passing of an era with the closure of our last operational reactor at Wylfa. With almost 45 years of successful, safe electricity generation now over, Magnox technology has become a proud part of the UK's scientific history.

Since we were established, we have been committed, to the introduction of a more dynamic commercial approach to site management that takes advantage of expertise in the global nuclear sector and have already seen the benefits through innovation, flexibility, accelerated work programmes and reductions in cost. This competitive, market-driven approach is a fundamental part of our overall strategy, designed to progress our clean-up mission in the most cost-effective manner for the UK taxpayer. At Sellafield, this will take the form of a strategic partnership or partnerships with the private sector, while our remaining SLCs are in the temporary ownership of global consortia for a contractual term.

Commercial contracts are serving us well at the Low Level Waste Repository, at Dounreay and now at Magnox where we are in the latter stages of the consolidation phase for the new contract for our 12 reactor and research sites. The changes proposed by the new Magnox Parent Body Organisation are already being implemented, and savings are being achieved. Our mission is important, not just as an environmental imperative but as a positive commitment to future generations and as a clear demonstration of confidence that the UK has the expertise to deal with the whole lifecycle of our

nuclear facilities, dating from the past decades but extending to those that are still in the planning phase.

The techniques and approaches being pioneered at our sites bring additional value for the UK economy, in enabling our supply chain to develop a unique level of experience that has significant potential in the overseas market.

As we pass the fifth anniversary of the tsunami which devastated Japan's eastern coastal region, along with much of the power station's infrastructure, the NDA and its subsidiary International Nuclear Services Ltd (INS) are sharing expertise in strategic planning and in dealing with difficult wastes, building on existing relationships developed by INS over the last few decades.

To deliver our mission, we are also committed to developing the workplace skills that will be needed over the coming decades, and the research that will accelerate progress and deliver innovative solutions. Our support continues through collaboration with partner organisations in the public and private sector, as well as through direct financial investments.

Meanwhile, the election of the new government in May 2015 marked another transitional phase for us, as we have begun the process of getting to know our new ministers along with a number of new MPs around our sites, and building an understanding of our role as a strategic authority.

Further change is being proposed through our updated Strategy which was published in April 2016 and, although our overall approach remains largely the same as outlined in the 2011 Strategy, we have been able to reflect the Spending Review settlement which sets the context for working more efficiently and seeking performance improvements.

At Board level, our thanks go to Janette Brown and Patrick Dixon, who have both stepped down as their period of office concludes and who have provided sterling services, both as Board members and in particular chairing respectively, the Audit and Risk Assurance Committee and the Safety and Security Committee. We also welcome two new colleagues who joined last summer - Janet Ashdown and Rob Holden have taken on their responsibilities with enthusiasm and commitment.

On a personal note, I am now in my final year as NDA Chairman, having been privileged to serve a term of nine years helping to address this challenge of national importance. I have seen the organisation grow into a mature, confident strategic body that is making excellent progress in driving the mission forward. I will depart with some sadness but also a great sense of pride at having being personally involved in the NDA's development. As I step down, I am confident that delivery of the mission will continue to gather pace, guided by a team of experienced and committed professionals across the estate.

Our staff at the NDA, its subsidiaries and SLCs are central to our mission, along with our many stakeholders, and they deserve thanks for providing support, challenge and dedication. Their success is our success, and their ongoing commitment underpins all that we are seeking to achieve.

Stephen Henwood CBE Chairman

## Chief Executive's Review



The past year has brought a number of major developments for the NDA, but perhaps the most significant were the UK Government's Spending Review, the publication of our latest long-term Strategy and the introduction of new management arrangements at Sellafield, our largest, most hazardous site that remains the number one clean-up priority.

The Spending Review followed the election of the new UK government and applied to the entire public sector. Its stated aim is to safeguard investment in priority areas while taking difficult decisions to bring down the nation's debt.

The NDA secured a funding settlement that, while requiring us to strengthen our focus on improving the efficiency of our operations, also enables us to continue making progress across the estate. It is an acknowledgement that our mission is important to the UK and ensures we are able to maintain our commitment to our priority programmes.

Our prime focus is to maintain the highest standards of safety and security. Delivering the decommissioning mission is entirely consistent with this focus.

In doing so, we remain committed to our core values which underpin our overall organisational approach. These values encourage us to be focused, professional, respectful and flexible as we require others to deliver on our behalf.

Over the course of the year, we have spent £3 billion in addressing the complex decommissioning tasks across the estate, and secured £1 billion in revenue to offset this cost.

Cost forecasts over the whole mission, which extends into the next century, are updated annually and we are required to estimate the costs of future work over the full lifetime of our mission. The overall undiscounted cost estimate for the next 100 years remains broadly in line with last year's estimate, at around £117 billion. However, changes in the discount rates mandated by HM Treasury and applied throughout government mean that the nuclear provision, on a discounted basis, is reported as £161 billion. Further details are provided in the Financial and Strategic Overview.

Working alongside our Parent Body Organisations (PBOs), SLCs and suppliers, the driving strategic message for the years ahead is to deliver the same work for less cost where possible, to seek better ways of doing things and to do better things (improving efficiency and effectiveness), while always keeping sites safe and secure.

This includes implementing innovative technological solutions and new processes, securing greater productivity, increasing workforce flexibility and improving performance. However, innovation does not always equate to complex, expensive or highly engineered equipment but can just as easily be a simpler process or technique. Our aim is to create a modern, workforce with the right skills to deliver maximum performance and value for taxpayers.

Our third and latest Strategy, finalised in March looks ahead at longer-term priorities and builds upon the Strategy of 2011. We remain broadly on track with the overall themes but are proposing refinements which, if implemented, have the potential to accelerate progress while reducing costs and securing earlier site remediation.

We are now also in the early stages of new management arrangements for Sellafield Ltd, which will deliver hazard and risk reduction more efficiently. From April 2016, the NDA became the owner of the SLC, Sellafield Ltd, replacing the previous PBO model where the owner since 2008 was a private-sector consortium.

The new structure, which results from extensive consultations with a range of experts within and external to government, will accommodate the challenges more easily and better allow for longer-term planning. The private sector will still be closely involved but as contractors providing expertise, rather than as an owner. A competitive procurement plan is being developed to appoint a strategic partner or partners who will support Sellafield Ltd going forward. The previous commercially driven model was no longer considered appropriate for the highly complex nature of Sellafield where decommissioning work is often difficult to define, uncertain and spans many years.

As part of the changes, we welcome Tony Fountain, who will Chair the new Sellafield Ltd Board and who brings valuable knowledge of the nuclear industry from his time as the NDA's Chief Executive between 2009 and 2011. Tony also has 30 years of industrial experience in the oil and gas industries.

Our thanks go to the outgoing Chair, Tony Price, and to the PBO, Nuclear Management Partners (NMP), who brought progress in a number of critical areas.

Over the past year, Sellafield Ltd's achievements include the removal of the entire bulk stocks of nuclear fuel from the Pile Fuel Storage Pond (PFSP), a historic milestone at one of the site's oldest ponds.

Additionally, a major breakthrough has been achieved in the Magnox Swarf Storage Silo (MSSS) – one of our most hazardous buildings, and a priority for clean-up.

A four-year research programme involving the NDA, Sellafield Ltd, National Nuclear Laboratory (NNL) and a number of universities has resulted in a breakthrough in understanding certain uranic waste behaviour, allowing for a much simpler treatment process. This will reduce the waste retrieval timeframe and save several hundred million pounds.

Operational performance at Sellafield has been generally positive. The Highly Active Liquor (HAL) Vitrification plant has performed well over the year meaning HAL stocks are particularly low. Sellafield has also recorded another good year for nuclear safety performance, reflecting positively on everyone involved with management and operation of the site.

The Magnox sites are reaching the conclusion of a period of change, following the appointment of the Cavendish Fluor Partnership (CFP) as the PBO for Magnox Ltd and Research Sites Restoration Ltd (RSRL). A lengthy, wide-ranging process has been required to reconcile tender proposals based on 2013 site conditions with developments since that time, leading to additional scope and cost implications. This is similar to work undertaken following the Dounreay PBO contract award and forms an integral part of the contract letting process.

We are confident the new Magnox contract will deliver significant savings over the full life of the contract. Among the achievements already secured are the merger of Magnox Ltd and RSRL into a single SLC, completion of defueling at Oldbury, full clean-out of Hinkley A ponds and retrieval of waste from the Berkeley vaults.

Another milestone was the end of electricity generation at our last remaining nuclear power station, Wylfa, after almost 45 years of safe operations. This brought the era of Magnox electricity generation to an end in the UK, an occasion of both pride and sadness for everyone who has, over the decades, been involved with the ground-breaking technology that once led the world.

Regrettably, the procurement for Magnox Ltd has also led to legal action by the previous PBO EnergySolutions EU, which has been heard in the High Court and for which we await judgement.

At Dounreay, our northernmost site, delivery of the agreed programme is proceeding well. The two new Low Level Waste (LLW) vaults are now accepting material, including more than 7,000 drums crushed by the replacement super-compactor.

The key success for Dounreay, however, is the ongoing transfer of a range of historic nuclear materials to Sellafield and the US, ensuring Dounreay will become fuel-free many decades earlier than previously anticipated.

Low Level Waste Repository Ltd (LLWR) continues with its impressive record on diverting waste towards more sustainable disposal and management options, including recycling, combustion and landfill for Very Low Level Waste (VLLW).

At our subsidiary Radioactive Waste Management Ltd (RWM), the public consultation on proposed geological screening closed at the end of 2015, and feedback is being evaluated. RWM continues to share its experience with partners in Europe who are embarked on similar programmes to develop underground repositories for higher activity radioactive waste.

Looking at supporting activities, we have agreed challenging new targets across the estate to secure a greater proportion of our annual spend with smaller businesses, Small and Medium-sized Enterprises (SMEs). At the same time, we welcome the opportunities afforded by collaborative procurement procedures to incorporate contractual terms that seek to include SMEs and take socio-economic considerations into account.

We are working with the government's export arm UK Trade & Industry (UKTI) to support our suppliers in the growing overseas market, where they are in a good position to take advantage of the expertise developed through working around our estate. Almost 30 businesses of varying sizes, including SMEs, have secured work in the global market and particularly in Japan where we continue to play a supportive role. Our subsidiary International Nuclear Services Ltd (INS) has a long-established presence in the country while a range of information-sharing agreements are in place. Our Strategy and Technology Director Adrian Simper, Head of Technology Melanie Brownridge, and Head of Decommissioning and Remediation Anna Clark have been involved in several organisations established in Japan to support clean-up operations at Fukushima-Dai-ichi.

It is now five years since the tsunami devastated the region and overwhelmed the power station, and I was recently privileged to see at first-hand some of the hugely impressive clean-up work around the site. At an international conference, Adrian Simper, Anna Clark and I were able to share our own decommissioning experiences and hear from overseas partners about their contributions. Our involvement in knowledge exchange and encouraging the involvement of UK expertise is ongoing, part of the nuclear community's commitment to support the Japanese effort.

The skills agenda continues to be important for us, as well as for the UK as a whole, and we support a series of initiatives across our sites. Sellafield is leading the way with degree-level apprenticeships and 'Trailblazing' apprenticeships that focus on high-level technical skills aligned to employer requirements. Last year they recruited a record number of apprentices, 27% of whom were female, a considerably higher proportion than UK industry generally.

Our broader involvement with Women in Nuclear (WiN) remains strong, as part of the drive to encourage a more balanced gender representation and bring the leadership potential of women into the heart of our sector.

Our Research and Development (R&D) investments are also paying dividends, and the collaboration with other public organisations such as Innovate UK is working well, leveraging significant additional funds to take projects forward, with particular support for smaller businesses.

Summing up, it has been a good year for overall site performance with important targets met or exceeded and the foundations firmly in place to succeed in the years ahead. We now have the management arrangements and delivery plans in place across the estate to ensure a clear focus on performance. I expect to see real improvements in safety, performance, efficiency and value for money during the coming years.

Communications and Stakeholder Relations Director Jon Phillips left the NDA at the end of the financial year after 11 years of exemplary service. Jon was the last of the original Executive team established at the birth of the NDA. I thank him for his contribution and wish him every success for the future. I am delighted that we have secured the services of Paul Vallance as our new Communications and Stakeholder Relations Director. Paul joins us from Rolls-Royce.

Finally, I remain hugely grateful to all those who contribute to our mission and our success, from within the NDA, our subsidiary organisations, the SLCs, PBOs, supply chain and communities in which we operate. As the Chairman has pointed out, their success is also our success.

John Clarke

**Chief Executive and Accounting Officer** 

# **Financial and Strategic Overview**

#### Overview

The NDA has continued to build on its track record of good financial management, by controlling expenditure within challenging budgetary targets, ensuring that expenditure is focused on key decommissioning activities and maximising income from its assets.

Over the course of the year, we have spent £3.1 billion in directly addressing the often complex decommissioning tasks, and have secured £1.1 billion of income to offset this cost.

The scale of work is compounded by the complexity of many of the critical projects at Sellafield, which are at an early stage in their design and delivery, and therefore inherently uncertain in both the means of physical delivery and cost and schedule of delivery. Elsewhere in the estate, where there is relative certainty over the work needed for decommissioning, the NDA has been able to run competitions such that the work can be delivered under target cost incentive fee (TCIF) arrangements, introducing more clarity and delivering reductions in the expected cost of the programmes.

The estimated cost (undiscounted) to complete the necessary decommissioning activity has reduced by  $\mathfrak{L}0.3$  billion. The undiscounted value provides a clear basis for comparing year to year figures as they are not affected by changes in the discount rate. The estimated cost is  $\mathfrak{L}117$  billion (2014/2015  $\mathfrak{L}118$  billion).

In accordance with International Accounting Standards, this estimate has to be discounted to arrive at the value of the provision shown in the NDA financial statements. The discount rate used by the NDA is prescribed by HM Treasury, and is updated in December of each year. For the first time, in December 2015, HM Treasury introduced a negative discount rate (-0.8%) for those liabilities extending beyond 10 years into the future, and this rate is used by all government bodies having long-term liabilities. The effect of introducing this new discount rate is to increase the NDA nuclear provision by some £89 billion, compared to the provision calculated using the positive discount rate of 2.2% mandated in the previous year. It should be emphasised, and as mentioned above, that the underlying estimate of the costs for completing the NDA mission is substantially unchanged.

The NDA's Spending Review settlement was confirmed in November 2015. NDA welcomes the recognition by Her Majesty's Government (HMG) of the vital importance of safe and secure nuclear operations and decommissioning and the need for continued investment in dealing with the nuclear legacy.

With this settlement, our aim will be to continue to make broad progress across our nuclear estate, but it is clear that in order to achieve that we and our Site Licence Companies (SLCs) will need to place even greater focus on achieving efficiencies and value for money.

The settlement requires the achievement of over £1 billion of efficiencies and savings in the NDA between 2016/2017 and 2019/2020 which we will achieve through better value contracts; top class commercial procurement; delaying non-safety-critical projects; and the cancellation of a project that is no longer needed due to a world-first breakthrough in nuclear decommissioning research

More details of the implications of the settlement are set out in our Business Plan and Strategy documents which were published in April 2016 and are available on the NDA website.

#### 2015/2016 Financial Highlights - In year

Our ability to operate within the funding envelope made available by Parliament is of paramount importance, as is the need to drive maximum benefit from the expenditure made. Income and expenditure are controlled against Departmental Expenditure Limit (DEL) control totals.

NDA gross expenditure of £3,313 million was funded by grant from Government, and the commercial income of £1,097 million received by the NDA is separately remitted to Government as required by the Energy Act (2004).

NDA's performance against its expenditure and income controls was as follows:

£m	Control	Actual
Programme expenditure		3,066
Energy trading		48
Fees to SLCs		106
Administration / industry wide		93
Total expenditure	3,325	3,313
Commercial income	(1,100)	(1,097)
Expenditure net of commercial income	2,225	2,216

NDA's expenditure net of commercial income was within the Supplementary Estimate voted by Parliament. The NDA used the principle of portfolio management to balance competing demands from the various SLCs to maximise value for money for the tax payer.

Of the total £3,313 million expenditure:

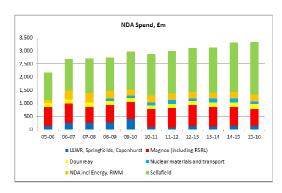
- £3,066 million was utilised in tackling the legacy which forms the core of the NDA mission
- a further £48 million expended on energy trading activities
- successful delivery of key milestones by the SLCs has resulted in fees payable under the terms of the contracts of £106 million
- the balance of expenditure £93 million was NDA administration and industry wide costs in support of the NDA mission. This includes research and development expenditure which will provide benefits in solving some of the technical challenges faced by the industry as a whole and investment in skills.

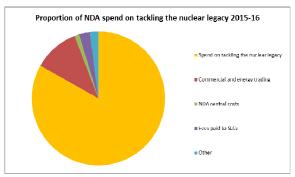
£1,097 million of commercial income was secured, dominated by receipts from reprocessing and management of spent fuels, and supplemented by sustained electricity generation from the last nine months of operation of the remaining Magnox power station. This income has been determined for DEL purposes using the discount rates prevailing from the previous financial year, as instructed by HM Treasury specifically for consistency and parliamentary reporting purposes.

However the income shown in the statutory accounts, based on International Financial Reporting Standards (IFRS), is different to the reported DEL figures as these require the application of negative discount rates (see page 23) in determining the income recognised from long-term contracts.

#### Spending within budget

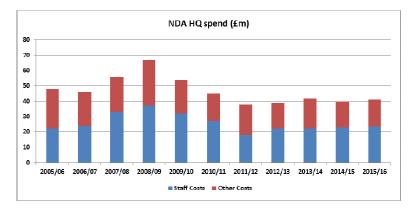
The bar chart below shows the expenditure by SLC with Sellafield the dominant site. The pie chart below demonstrates that the bulk of the NDA expenditure is directly on tackling the legacy, with NDA central costs, fees and other costs amounting to 6%.





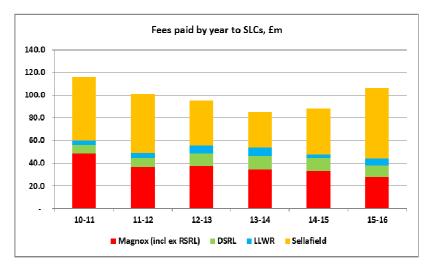
The running cost of the NDA is £41 million per annum, with income of £3 million producing a net total of £38 million. The cost of the NDA represents just over 1% of the total estate spend. The running costs of the NDA are now lower than they were when the NDA became fully operational in 2005. The continued management of running costs is an example of the NDA's track record of financial management and reflects the challenging fiscal climate in recent years and associated focus on reducing running costs across the sector.

The graph below shows the pattern of NDA running costs over the 11 years of operations. The 'other' costs include day to day non staffing costs such as office accommodation, audit fees and IT as well as the external resources required to undertake assurance work across the NDA estate.



SLCs are paid fees which reflect their performance in the year in achieving programme milestones, output targets and efficiencies. The fee paid by the NDA to its contractors is, therefore, not a fixed amount and varies each year according to performance levels achieved. In most areas of the estate, plans are relatively mature with performance closely tracking those plans and, as a consequence, predictable and stable fees paid to SLCs. This is reflected in the introduction of TCIF arrangements, which reward both cost improvements and key milestone delivery, on the more mature sites.

The fees paid to SLCs will reduce in the 2016/2017 financial year following the implementation of the Sellafield Model Change on 1 April 2016, under which Sellafield Ltd will become a wholly owned subsidiary of the NDA. Under the new arrangements, fee will not be paid to Sellafield Ltd.



## Reducing long-term expenditure: how the NDA has shaped the commercial model for delivery of decommissioning.

The NDA's programme for cleaning up the nuclear estate by its nature involves a range of complex, interdependent and often unique projects. The ability of the NDA and its contractors in the estate to achieve progress in this challenging environment requires continuous improvement in the areas of project, programme and supply chain management.

Following the award of the contract to CFP for the management of the Magnox and RSRL sites in September 2014 and in line with the contract, the programme has been in a consolidation phase during which the two SLCs (Magnox and RSRL) have been combined, workforce reduction in line with the CFP bid strategy has been enacted, and an integrated performance plan implemented. The consolidation phase has taken longer than expected but the savings required by HMG when approving the competition remains forecast to be achieved.

The Sellafield Model Change is expected to drive improved performance and value for money at the site. The NDA will work alongside the SLC to ensure the delivery of the site plan and to maximise the potential for efficiencies and value for money at the site.

Separate to the work of the SLCs, the NDA will continue to explore strategic opportunities for reducing long-term expenditure across the estate as a whole, for example by enabling the optimisation of site end states.

The recent Spending Review resulted in a funding profile which, while similar in scale to the level of expenditure of recent years, requires the NDA and SLCs to continue driving efficiencies to deliver the scope of work required in the medium term, and managing emerging cost pressures, while remaining within available funding.

#### Income

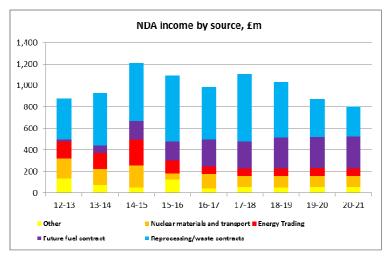
The NDA's gross expenditure is funded by HMG, with income generated passed back to HMG to offset the cost of the NDA programme to the public purse. The income earned by the NDA comes from various sources, the relative importance of which is changing over time.

Of the current year total of £1,097 million, £123 million is attributable to electricity sales primarily from Wylfa, which after several extensions to its original scheduled closure date reached the end of its operational life at the end of December 2015, producing a final nine months of electricity generation and income. The Wylfa station was once the world's most powerful nuclear power station, delivering 40% of Wales' electricity needs and operated for nearly 45 years. The safe continued extension of operations at the Wylfa and Oldbury stations generated an extra £1 billion in income for NDA and therefore HMG.

Income from reprocessing and waste and spent fuel management activities delivered £792 million of income in year (up £56 million from previous year).

The third key strand of income is from nuclear materials management (including commercial arrangements regarding the ownership and future management of plutonium and shipping of waste and other materials).

Looking forward, the composition of the income will be significantly different, with electricity generation at Wylfa having ceased and only small amounts of energy sales remaining. The reprocessing element of income from reprocessing and management of wastes and fuels from the legacy contracts will also reduce as the facilities reach the end of their commercial life. The bulk of the income will be derived from the contract to take ownership and treat the spent fuel arising from the EDF fleet of AGR power stations (the 'future fuel contract' referred to overleaf).



The NDA continues to explore commercial opportunities which offer value for the public purse, including transactions relating to the ownership and management of nuclear materials. It has an active policy of disposal of surplus land and buildings in support of the Cabinet Office initiative.

#### 2015/2016 Financial Highlights - Planning for Future challenges

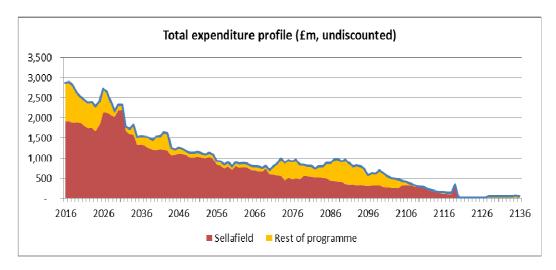
- the estimated undiscounted total cost of the NDA mission over the projected 100+ year timescale
  is £117 billion (undiscounted), £161 billion (discounted). Considering this as a single figure
  however could lead to a false sense of certainty in the outcome. The following paragraphs discuss
  the evolution of the number, the inherent uncertainties within it and the range of potential
  outcomes
- as the Comptroller and Auditor General said in the NDA ARAC 2012/2013, "given the very long timescales involved and the complexity of the plants and material being handled, considerable uncertainty remains in the cost estimate particularly in later years"
- the cost estimates across the estate, in undiscounted terms, are now relatively stable
- the benefits of the recent Magnox and RSRL competition have now been incorporated, with the CFP performance plan now in place
- at Sellafield the first of the changes made to the plan since Performance Plan 14 (PP14) was accepted by the NDA have been implemented, including a major change in the strategy for managing waste from MSSS.

#### Future cost and estimating uncertainty

Compliance with Accounting Standards requires the NDA to disclose the discounted cost of the decommissioning mission as a single point number in the Statement of Financial Position – the 'Nuclear Provision'. It is important to understand both the source of that single number and what it represents, the inherent uncertainty within it, and the fact that it is simply a single point in a credible range of potential outcomes.

The NDA management's best estimate of the future costs of the estate is predicated on dealing with an assumed inventory of materials with varied radiological characteristics, and using the extant strategy for retrieval and disposal of the resulting materials over several decades. Each of these elements (quantity, method and time to treat) is uncertain in their own right, and the cost of developing the necessary technology and plants to deal with these activities is necessarily also uncertain. The quality of the forecast becomes less certain as time goes out. Consideration also has to be given as to what standards of clean up may be generally acceptable in the future in respect of the final planned end state for the sites.

The following graph shows the undiscounted Annual Expenditure profile for future years (excluding NDA administrative and other non-programme costs), derived from extant life time cost projections from each of the SLCs.



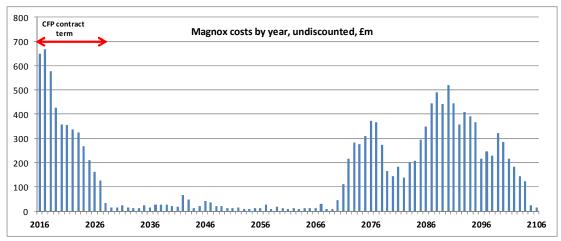
The expenditure profile illustrates a downward trend in expenditure over the next 50 years, following a short-term peak over the next ten years, as sites enter into Care and Maintenance, with subsequent increases in expenditure in the period from 2070 when final site clearance work on Magnox sites is undertaken.

### Estate excluding Sellafield (cost to complete £29 billion undiscounted, £44 billion discounted, in 2014/2015 was £30.6 billion undiscounted / £16.7 billion discounted)

The maturity of scope in the non-Sellafield SLC plans, and the successful introduction of private sector expertise, has enabled NDA to drive value for money for the taxpayer, through the transition from cost reimbursable to target cost incentive fee contract structures. Over time this has led to stabilisation and ultimately reduction in the projected cost of decommissioning. This benefit to the tax payer has continued following the incorporation of anticipated savings from the Magnox/RSRL competition.

The total estimated lifetime undiscounted cost of decommissioning the Magnox estate is £15 billion and is supported by a new lifetime plan agreed following the Consolidation Phase. This plan reduced the estimated cost by £0.4 billion compared to last year's estimate. The new contract is being let on a target cost incentive fee basis, reflecting the increased certainty over the scope of short-term activity (the next 14 years) necessary to get the sites into their long-term Care and Maintenance states.

Nonetheless, considerable uncertainty will still remain in the ultimate cost of the programme of work to return the Magnox sites to the currently planned final end state envisaged in the NDA strategy – work that will be performed after the current CFP contract. The profile of the work necessary is shown in the following graph with the right hand side expenditure relating to Final Site Clearance.



The recently competed contract period covers costs in the first period of time (to 2027) by which time all of the sites are planned to be in an interim state. A long period of Care and Maintenance follows through to circa 2070, when work starts on dismantling of the reactor at Berkeley as part of final site clearance. Work across the remainder of the fleet then continues through until the final site, Wylfa, is completed in 2106. The cost of the final site clearance activity over a 36 year period is currently estimated at **£7 billion** – almost half of the estimated final total cost.

The graph clearly illustrates the low annual cost of the Care and Maintenance period. The sensitivity analysis discussed later show the impact of applying the uncertainty of cost estimates (Class D ranges). Changing the timing of the final site clearance by a decade would have very little overall effect on the total cost on an undiscounted basis, in contrast to the discounted figures discussed later in this section.

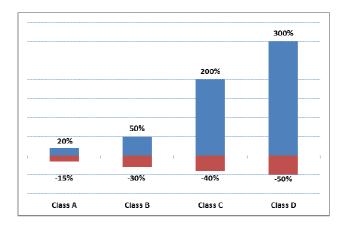
## Sellafield (cost to complete £88 billion undiscounted, £117 billion discounted, in 2014/2015 was £87.2 billion undiscounted, £53.2 billion discounted)

At Sellafield the nuclear provision estimate combines the cost projections from the Performance Plan (known as PP14) with management estimates as to near term cost pressures and very long-term costs. The underlying undiscounted cost estimate for Sellafield (before adjustment for plutonium) has reduced slightly during the year. The provision also includes, as in previous years, the estimated additional costs arising from the preferred strategy for the long-term management of plutonium, which are not included in the Performance Plan.

The Sellafield Performance Plan will continue to evolve in future years as the programme develops and individual projects progress. An example of this evolution is the change in strategy for the MSSS programme in which an alternative waste treatment solution has been proven to be feasible, enabling the removal of the planned Silos Direct encapsulation Plant (SDP) project and its replacement with a better technical solution which is also more efficient and lower cost alternative.

#### Sensitivity of estimated future costs

Estimates are classified according to the level of certainty, with ranges applied to reflect this. The NDA estate uses four different classes of estimate (A to D) with A having most certainty, and D the least certainty in line with the principles of the HM Treasury Green Book. So for Class D estimates, credible outcomes could range from -50% to +300%, as shown in the graph below. Inevitably as much of the expenditure of the NDA is not scheduled to start until many years or even decades in to the future, using as yet unknown technologies, then the estimates will tend towards class D.



Notwithstanding this uncertainty, the NDA continues to work with the SLCs, scrutinising their long-term plans and benchmarking them against best practice for project and programme costs and schedules and to ensuring that these plans are coherent and consistent with agreed strategies.

The NDA has reviewed the methodologies used in the calculation of the ranges of the nuclear provision and has recognised that removal of optimism bias, application of the HM Treasury Green Book estimating uncertainty principles and concluded that it is appropriate to maintain the potential

undiscounted range per last year. The NDA, having considered a number of scenarios with a range of possible outcomes, continues to estimate the cost within a potential range from £95 billion to £218 billion. The nuclear provision itself is on a discounted basis and represents a single point estimate within a range and is NDA management's judgement of future costs based on plans produced by the SLCs, accepted by the NDA, and known changes in assumptions and facts.

It must be stressed that whilst the range, and consequently the provision, reflects the costs over a 100+ years the NDA and SLC Management attention is firmly on delivery of projects in a safe and secure manner whilst controlling and driving down costs in the immediate, short and medium term i.e. 1, 5, and 20 years. This is done in line within the strategic coherence over the longer term.

In considering sensitivities of the cost estimates, there is a clear divide in the order of magnitude of the sensitivity between sites which have relatively near term interim or final end states being achieved, and Sellafield, Magnox and GDF with activity over a significantly longer term. For example:

- if Sellafield costs post 2034 increase by 100%, the cost estimate would increase by £24.8 billion
- if Sellafield major project costs post 2034 increase by 300% or reduce by 50%, this would result in changes of +£74.3 billion to -£12.4 billion
- an increase in the Magnox final site clearance costs of 100% would equate to £6.8 billion
- Dounreay Site Restoration Ltd (DSRL) Interim End State date slips three years equates to +£0.5 billion and
- if GDF costs post 2034 increase by 300% or reduce by 50% would equate to an increase of £22.5 billion or a reduction of £3.8 billion.

Whilst the legacy, and consequently the provision, is better characterised than previously it continues to be subject to ongoing risks that could impact on the costs of delivering the NDA mission, such as:

- a significant nuclear safety incident leading to delays in the management of current liabilities and/or increased costs
- · the discovery of currently unknown additional hazards or other challenges
- future regulatory or Government policy changes
- · changes to the final agreed end state for sites and
- changes to society's expectations and requirements.

The NDA will continue to review and update the nuclear provision, and to incorporate the impact of new opportunities as they arise – for example acceleration of work on Legacy Ponds and Silos (LP&S), integrated waste management, optimised decommissioning and site restoration. Some of these opportunities may require us to reprioritise our allocation of funding in the short-term but with a reduction in the full lifetime costs.

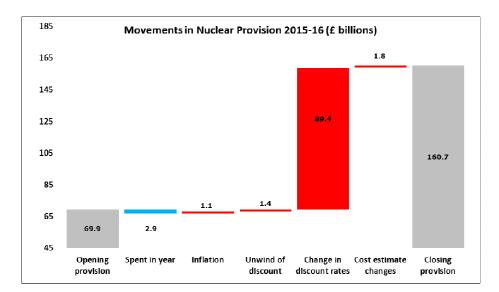
#### Change in provision over the year

Reductions in the provision have arisen from:

• the value provided for the financial year being released from the provision, thereby producing a reduction of £2.9 billion.

Increases to the provision have included:

- the impact of the changes in discount rates (as directed by HMG), which increased the discounted value of the estimate by £89.4 billion
- the increases from the unwinding of the existing discount (£1.4 billion) and inflation (£1.1 billion) which are applied to the provision every year and
- cost estimate changes arising from revised cost allocations and the additional provision included for plutonium management which increase the obligated liability estimate by a net £1.8 billion.



Attention should be paid to the impact of the change in discount rates, which applies to the provisions held by all government departments and bodies. These are dictated by HM Treasury and announced in November each year.

	Short term rate	Medium term rate	Long term rate	Impact of change
	(0-5 years)	(5-10 years)	(>10 years)	
2004-05 to 2011-12	2.20%	2.20%	2.20%	-
2012-2013	-1.80%	-1.00%	2.20%	+£3.80 bn
2013-14	-1.90%	-0.65%	2.20%	-£0.32 bn
2014-15	-1.50%	-1.05%	2.20%	+£0.21 bn
2015-16	-1.55%	-1.00%	-0.80%	+£89.38 bn

Until 2011/2012, provisions were calculated by discounting the current estimate of future expenditure (the 'undiscounted' total) by a uniform 2.2% per annum discount rate which meant that the discounted value was always lower than the undiscounted total. This effect was particularly noticeable in very long-term provisions such as those held by the NDA.

The discounting effect has now effectively been reversed, with the introduction of negative discount rates for short- and medium-term expenditure in 2012/2013 followed by the introduction of negative rates for long-term expenditure in 2015/2016. The impact of the changes is shown in the above table with the change to long-term rates having a substantially higher impact due to the long term nature of much of the NDA programme.

The recent changes to discount rates result from a change in the way HM Treasury determine the rates, which are now intended to represent the real term cost of government borrowing which at the present time creates a negative rate because the interest payable on UK gilts is less than the rate of inflation – typically in the past the rate was higher than inflation which produced a 'positive' discount rate.

It is important to note that the underlying undiscounted cost is not affected by the change in discount rates and indeed the undiscounted provision has decreased during 2015/2016. The undiscounted total of the nuclear provision is £117.5 billion at the end of 2015/2016.

The application of the negative short-, medium-, and long-term rates produce an overall discounted total as shown in the accounts of £160.7 billion. The changed discount rates increase the proportion of the overall discounted liability which relates to later years, and therefore a higher proportion of the discounted value is subject to the uncertainties described above.

A 0.5% change in discount rate over the life of the estimate would move the provision by approximately £30 billion.

#### Going concern

The accounts show a deficit on the Statement of Comprehensive Net Expenditure of £92,208 million for the year ended 31 March 2016 and net liabilities of £160,561 million on the Statement of Financial Position primarily attributable to the nuclear provision.

We note that likely reduction in the level of estimate income will result in an increased net funding requirement for the NDA, However, we acknowledge the support and understanding that DECC has given us and there is no reason to believe that DECC's sponsorship and parliamentary approval will not be forthcoming. On this basis it has been considered appropriate to prepare these financial statements on a going concern basis.

#### Total discounted Nuclear Provision by site and SLC

		Movements in provision - discounted							
	2014/15	Unwind	Inflation	Released	Discount	Other	Movement	2015/16	2015/16
	discounted	ofdiscount		in year	rate change	cost change	discounted	discounted	undiscounted
Total discounted nuclear liabilities	£m	£m		£m	£m	£m	£m	£m	£m
Berkeley	(589)	(1)	(9)	71	(1,114)	(14)	(1,067)	(1,656)	(1,121)
Bradw ell	(210)	(4)	(3)	37	(1,363)	(273)	(1,607)	(1,817)	(1,115)
Chapelcross	(664)	(17)	(10)	76	(2,021)	(114)	(2,086)	(2,749)	(1,663)
Dungeness A	(525)	(10)	(8)	41	(1,522)	(8)	(1,507)	(2,032)	(1,200)
Hinkley Point A	(651)	0	(10)	57	(1,370)	(123)	(1,446)	(2,097)	(687)
Hunterston A	(600)	(1)	(9)	55	(1,172)	(207)	(1,334)	(1,934)	(1,339)
Magnox central costs	(1,504)	(60)	(23)	102	(1,216)	1,116	(81)	(1,585)	(1,290)
Oldbury	(873)	(9)	(13)	62	(1,525)	303	(1,182)	(2,055)	(1,365)
Sizew ell A	(709)	(5)	(11)	42	(1,446)	162	(1,258)	(1,968)	(1,180)
Traw sfynydd	(288)	(4)	(4)	61	(1,139)	(534)	(1,620)	(1,908)	(1,142)
Wylfa	(728)	(9)	(11)	25	(1,789)	(38)	(1,822)	(2,550)	(1,316)
Former RSRL sites	(1,174)	(7)	(18)	94	(119)	244	195	(979)	(1,692)
Magnox Limited	(8,516)	(127)	(129)	722	(15,796)	515	(14,814)	(23,330)	(15,112)
Sellafield Limited	(53,200)	(1,063)	(829)	1,925	(61,250)	(3,004)	(64,222)	(117,422)	(88,260)
Dounreay Site Restoration Limited	(2,394)	(96)	(37)	173	(358)	(0)	(319)	(2,713)	(2,480)
LLW Repository Limited	(352)	(9)	(5)	19	(407)	0	(403)	(755)	(578)
	(552)	(5)	(5)		(407)		(403)	(733)	(570)
INS Contracts	(19)	(1)	(0)	0	0	0	(1)	(20)	(18)
Springfields	(387)	(1)	(6)	40	(538)	(9)	(514)	(901)	(622)
op:g.ioisto	(307)	(-/	(0)		(330)	(5)	(514)	(501)	(022)
Capenhurst	(723)	(21)	(11)	31	(466)	(0)	(467)	(1,190)	(972)
Geological Disposal Facility	(4,216)	(128)	(67)	26	(10,564)	685	(10,048)	(14,265)	(9,361)
Authority	(69,808)	(1,446)	(1,086)	2,937	(89,379)	(1,814)	(90,788)	(160,596)	(117,403)
NDA group companies	(65)	(2)	(1)	1	(7)	(10)	(19)	(84)	(79)
NDA Group	(69,873)	(1,448)	(1,087)	2,938	(89,386)	(1,824)	(90,807)	(160,680)	(117,482)

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John Clarke Chief Executive and Accounting Officer 20 June 2016

# **Performance Report - Analysis**



After a 5 year lifetime extension, Wylfa ceased generation in December 2015.

# **Case Studies**

#### **Priority Programmes and Major Projects**

A large number of projects are under way across the NDA's sites, of varying scale and complexity. Many are linked or associated with other projects, and are grouped together into distinct programmes. The most significant of these programmes and projects, either by value or importance, are identified as Priority Programmes and Major Projects.

A quarterly report providing a high-level overview of these Priority Programmes and Major Projects is published on our website, giving stakeholders visibility of the progress in areas that are strategically important to the mission. Goals have been established for each programme and project, and appropriate targets are highlighted in the annual, three-year Business Plan.

For each programme, the report reflects progress measured against a performance baseline derived from the Lifetime Plan (LTP) for each site or contract. The performance baseline is expressed in terms of a target cost range for most programmes, reflecting the inherent uncertainty in delivery of complex programmes over a long timescale.

The following case studies look at progress on Priority Programmes: four at Sellafield, one for the Magnox sites, one for Dounreay and the National Low Level Waste Programme.

#### PROGRAMME: First Generation Magnox Storage Pond (FGMSP)



Progress on site decommissioning with the first bulk quantities of sludge removed.

The FGMSP is six metres deep, with sludge that is up to one metre thick in places, and holds 14,000 cubic metres of contaminated water including 1,500 cubic metres of radioactive sludge – equivalent to around half an Olympic-sized swimming pool. Its decommissioning is one of the most complex challenges in the Sellafield Ltd mission.

It is extremely congested and, as well as sludge, stores Magnox spent fuel, miscellaneous nuclear wastes and skips. During its 26-year operational lifetime, approximately 27,000 tonnes of fuel (almost 2.4 million fuel rods) were processed from Magnox power stations in the UK, Italy and Japan.

Work has now begun to remove bulk quantities of sludge and fuel. The first bulk sludge transfer took place at the end of March 2016, when a skip containing sludge and corroded Magnox fuel was washed using the new Deluge Skip Wash Box, in preparation for exporting the fuel from the pond.

The box, which acts like an underwater dishwasher, was then used to flush out the sludge via the newly installed permanent sludge transfer platforms to the Sludge Packaging Plant (SPP1) buffer for long-term storage.

This then joined the 15 cubic metres of sludge which was previously exported from the facility via a temporary floating platform to complete the active commissioning of the buffer store last October in readiness for the start of bulk sludge transfers.

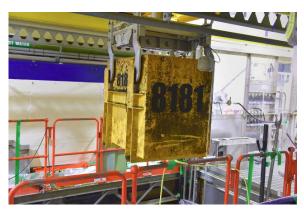
Following washing, the first fuel skip was successfully exported from the facility in May 2016 via the recently refurbished export facility and the fuel transferred to modern storage in the Fuel Handling Plant (FHP) ponds. This major milestone represents the start of bulk fuel and sludge exports from the facility and further transfers of fuel and sludge will continue through the rest of the financial year.

Now that the main sludge transfer platforms are in place, equipment to recover sludge from the pond floor is also in the process of being installed which will allow bulk sludge recovery to commence from this area as well. This equipment will enter service before March 2017.

Dorothy Gradden, Head of FGMSP, said: "Although it's not the first time we've taken sludge out of the pond, we can now say we've started a new era of decommissioning where sludge retrieval has gone into mainstream operational mode. The trials and tests are over and we're now getting on with the mission of making FGMSP a safer place day by day."

Under the current programme, bulk fuel and sludge exports are scheduled to be completed by 2022, at which point FGMSP risk and hazard will have been significantly reduced.

#### PROGRAMME: Pile Fuel Storage Pond (PFSP)



The last canned fuel has been removed from the PFSP.

Sellafield Ltd's most significant achievement for decades was the removal in March 2016 of the bulk stock of historic metal fuel from the PFSP.

The PFSP played an important role in development of the UK's original nuclear deterrent after the last war, cooling nuclear fuel rods from the Windscale Pile reactors. Some of the fuel had been stored in the pond ever since.

During its operational life, the pond processed 2,100 tonnes of pile fuel and 300 tonnes of Magnox fuel before operations ceased in the 1970s.

The milestone at the world's oldest open air spent fuel pond came after decommissioning teams lifted out the final skip of fuel using a remote-controlled process.

This work decreased the radioactivity content of the 68-year-old pond by 70 per cent, vastly reducing the risks and hazards associated with the facility.

A lead-and-learn approach was deployed, where the unshielded skips of fuel were lifted out of the pond, transferred across the operational area and then lowered down a hoist well into a shielded flask to be lidded and transported.

Operators controlled the move from 12 metres away, working behind radiation shielding using cameras and well-rehearsed procedures to complete an operation first trialled in 2011, when 350kg of metal fuel was exported from PFSP.

The removed fuel has been transferred to one of Sellafield's modern storage buildings and the focus has now turned to exporting the pond's estimated 350 cubic metres of sludge and the remainder of the 750 tonnes of Intermediate Level Waste (ILW) and LLW solids.

This success follows an earlier achievement in October 2015, when removal of the last 'canned' fuel was completed. The canned fuel, consisting of 191 stainless steel cans containing fuel pins, pellets and cladding from the Windscale Advanced Gas Cooled Reactor (WAGR), was transferred into storage.

The PFSP facility is scheduled to be ready for dewatering in 2019, 21 years ahead of the original schedule date, followed by decommissioning and demolition. Paul Foster, Chief Executive Officer of Sellafield Ltd, said: "This was a truly landmark moment in the decommissioning of Sellafield. The enormity of the challenge cannot be underestimated – the pond was built with no design for how its contents would be removed. We have had to retro-fit an export process and then safely execute it in one of the most challenging environments imaginable."

#### PROGRAMME: Pile Fuel Cladding Silo (PFCS)



Preparation has begun to enable access to waste inside the PFCS.

Work has been successfully undertaken to prepare for installing a set of doors that will enable access to waste inside the PFCS.

Built in the early 1950s, PFCS is one of Sellafield's four Legacy Ponds and Silos that together form the site's highest hazards and most technically complex decommissioning challenge.

At 21 metres high, the PFCS comprises six compartments which hold more than 3,200 cubic metres of ILW (the equivalent of 30 double-decker buses).

Its primary role was to store radioactive fuel cladding and graphite from the military

project at Windscale. As Magnox power stations started to generate electricity for domestic use, it also received fuel cladding from the Calder Hall and Chapelcross sites.

Removing the contents requires construction of an external superstructure that will be fitted with equipment capable of reaching through the hole being made in the thick concrete walls to grab and retrieve the waste material.

The silo is airtight and its atmosphere is controlled with inert argon gas to prevent propagation of a fire – therefore the holes being made to retrieve the waste through are sealed with six highly complex steel containment doors. During the last financial year, manufacture was completed of one of the doors, along with manufacture and testing of the frame needed to safely lift and position it on to the side of the silo.

Meanwhile, the Retrievals Access Penetration (RAP) Rig, which will enable the holes to be cut into the silo, has been manufactured and is scheduled to undergo testing and cutting trials.

Head of PFCS Programme Gary Snow said: "This is a significant landmark and places us one demonstrable step closer to gaining access to the silo contents and embarking upon our mission of risk and hazard reduction. This achievement was not easy; and indeed many barriers have been overcome by the RAP and Silo Doors team for which they deserve great credit."

#### **PROGRAMME: Magnox Swarf Storage Silos (MSSS)**

The 1960s-built silo contains metallic debris, or swarf, produced by removing the outer cladding from spent Magnox fuel, which is sent for reprocessing. The material is stored under water in 22 silos, along with other items of ILW.

The facility dates from the early days of the nuclear industry and is one of the NDA's four highest priority decommissioning projects. The silo is now well beyond its operational life and its hazardous contents must be removed for storage in more modern facilities.

A breakthrough in the management of nuclear waste at the historic MSSS is set to accelerate progress at Sellafield and save hundreds of millions of pounds.

Scientists studying ILW have discovered new information about the material's long-term behaviour which paves the way to a radically simplified approach to ILW packaging and disposal that will see significant reductions in the timescales and costs. The research focused on the chemical behaviours of ILW stored in the MSSS. Previously, a 22-step mechanical treatment and encapsulation process was thought necessary to manage and ultimately dispose of ILW in the silos.

The findings suggest that this approach could be replaced with a three-step solution which stores the unconditioned waste inside a double-walled container, leaving it suitable for long-term storage in a shielded facility. Switching to this new method could speed up MSSS decommissioning by several years and provide huge savings to the taxpayer. The technique could also be applied to other redundant nuclear facilities in the UK and around the world.

The four-year study was led by the NDA, Sellafield Ltd and the National Nuclear Laboratory, with academics from the universities of Bristol, Leeds and London South Bank. It focused on the corrosion behaviours of magnesium and uranium, shedding new light on the hazards posed by the materials to people and the environment in the long-term.

An added benefit of the alternative approach is the reduction in 'secondary wastes' created during the treatment phase, producing an estimated 10 per cent fewer waste packages during final MSSS decommissioning.



The installation of the 50-tonne metal 'transfer tunnel' in the MSSS facility.

Meanwhile, work is progressing on the first Silo Emptying Plant (SEP), one of three 360-tonne machines which will retrieve the highly radioactive contents from the MSSS.

One of the main components, a 50-tonne metal 'transfer tunnel' has been lifted into place within the building. Attention will now turn to delivering the remaining components to enable assembly of the SEP machine in situ. Retrievals are currently scheduled to start in 2018, marking the start of approximately two decades of work. Production of the remaining two SEP machines is still ongoing.

#### PROGRAMME: Magnox Optimised Decommissioning Programme (MODP)

At the 12 Magnox sites, work is concluding on the process of embedding the approaches outlined by the new PBO, Cavendish Fluor Partnership (CFP). This is called Consolidation and forms part of the Competition process which saw CFP appointed in 2014.

The consolidation process has required a comprehensive assessment of all work activities at each of the 12 sites followed by adjustments to reflect both progress and delays in the period since 2013 and re-alignment to a fully programmised delivery model.

A proportion of the additional scope that needs to be addressed results from activities that were less advanced than forecast, under the previous contract. However, CFP and the NDA are confident that the overall programme will be delivered more efficiently and achieve substantial savings for the taxpayer. The changes being agreed are part of the contractual agreement that sets out the procedures for transferring from the previous programme to the CFP approach while accommodating revisions required to reflect the most recent on-site developments.

Among the early achievements has been the merger of Magnox Ltd and RSRL, combining the two research sites at Harwell and Winfrith with the reactor sites into a single SLC, allowing the development of a simplified structure with a range of shared management systems. This was completed on 1 April 2015 following regulatory approval. Meanwhile, CFP-led innovations are being introduced, particularly in waste management and storage arrangements, as progress continues to be made in delivering the sites towards the Care and Maintenance phase.

The scope of the MODP is being extended to include CFP's innovations and, as part of the integration into a single SLC, now covers the programmes at Harwell and Winfrith. Once all proposed changes are agreed and confirmed, the finalised plan will be renamed.

Both research sites are making good progress, with the movement of nuclear materials from Harwell to Sellafield well under way while targets were exceeded for the retrieval of canned ILW from the storage tubes and processing through the Head End Cells. At Winfrith, the southern part of the site is now cleared after the External Active Storage Tanks were cleaned out and demolished.

Other notable achievements of the past financial year include the completion of defueling at Oldbury, leaving Wylfa as the only remaining Magnox Ltd site with magnox fuel. The act of defuelling removes 99% of the radiological hazard.

December saw the end of electricity generation at Wylfa, which brought the Magnox era to a successful close in the UK. British science's pioneering Magnox design delivered the world's first nuclear power into homes and businesses, safely keeping the lights on for many decades and paving the way for the subsequent reactor designs that are still operational today. Wylfa had operated for five years beyond its scheduled closure date after demonstrating an excellent safety record, earning £750 million of additional revenue for the NDA.

Elsewhere, both spent fuel ponds at Hinkley Point A have now been fully drained and decontaminated, reducing dose rates by two thirds. The ponds were among the more challenging in the fleet with higher levels of sludge and radiation than at other Magnox sites.



Ponds at Hinkley Point A fully drained and sealed.

At Berkeley, all waste has been retrieved and cleanout has been completed in the chute silo, one of the four vaults that contain the site's ILW. Two Ductile Cast Iron Containers (DCICs) have also been filled with Fuel Element Debris (FED) material from another of the vaults, which pose a special challenge due to the unique range of contents from the former power station from the neighbouring research labs.

At Bradwell, Phase 1 work has been completed on cladding both reactor buildings which will provide protective weatherproofing during the site's closure state. The old glass and metal panels were removed as part of the project, after protecting the buildings for more than half a century.

#### **PROGRAMME: Dounreay Decommissioning Programme**

DSRL continues to perform well on progress towards its point of closure, or Interim End State, when all decommissioned buildings will have been demolished and radioactive waste made safe for long-term storage.

Under the contract with the Cavendish Dounreay Partnership (CDP), now in its fourth year, Care and Maintenance is anticipated to take place 2030-2033, significantly earlier than the 2038 date forecast in previous plans. All the milestones agreed when the contract was awarded are being met, subject to the adjustments required by the NDA to take account of the decision to prioritise transferring a range of historic nuclear materials, left over from Dounreay's research work, to Sellafield, where they will be consolidated with similar material in safe, secure storage until a long-term disposition route is agreed. The transfer programme, which will simplify the site's safety and security requirements, has been a major focus over the last year. A number of successful transports have taken place, carefully co-ordinated with all the relevant authorities to provide the highest level of safety and security at all times. Transport routes include road, sea and rail options, using the services of the specialised NDA subsidiaries Direct Rail Services (DRS) and INS. Supporting activities have also been taking place to ensure the material is treated and packaged appropriately ready for transport. It is anticipated that the movements will continue for several years.

In December, the first shipment took place of fuel from the Prototype Fast Reactor (PFR). This followed the completion earlier in 2015 of the first phase of transferring breeder material from the Dounreay Fast Reactor (DFR).

Meanwhile, under a unique agreement with the US, 700kg of highly enriched uranium will be transported from the site to America, where it will be exchanged for material that can be used for medical treatments in Europe.



The Encapsulation Plant

On-site decommissioning activities are also moving forward in line with the programme to reach closure. The first two underground waste vaults, completed during the previous financial year, are now accepting LLW. The vaults will take up to 175,000 cubic metres of solid LLW, which is expected to arise as facilities are decommissioned and demolished. Waste retrieved from a series of historical pits at the site will also be transferred to the new facility. Up to a maximum of six shallow engineered vaults may be required in total, to be built in phases. Once the vaults have been filled and sealed, the surface will be restored and landscaped. As part of the process, an Encapsulation Plant has been constructed to fill the LLW containers with cementitious grout before disposal in the vaults.

LLW from decommissioning is managed at the Waste Receipt Assay Characterisation and Supercompaction (WRACS) facility, where drums containing the waste are crushed to minimise the volume for disposal and placed in containers which then pass through the Encapsulation Plant. Following the successful replacement of the supercompactor, which was out of action between 2011 and 2015, 7,179 drums have been crushed as at the end of March, making a significant inroad into the backlog of 16,000 stored drums.

Meanwhile, the safety improvement programme developed following the 2014 sodium tank fire is beginning to produce positive results thanks to the dedication and effort of senior management and staff. A notable highlight of the past year was achievement of a flawless 13-year safety record at the DFR, equating to 4,748 days without a lost-time accident. An open reporting culture is among the factors behind the strong safety record, along with the involvement of staff at all levels in planning work and encouragement to identify issues before they become significant.

#### PROGRAMME: Low Level Waste (LLW) Programme



Repository on track to extend its life by 100 years with 89% of LLW diverted from the site.

2015/2016 saw another excellent performance with 89% of LLW diverted to alternative treatments such as metal treatment and recycling, combustion and consignment to specially licensed landfill sites. Of this total, 81% was generated by the NDA estate and the remaining 19% by other waste producers.

This significantly reduces demand for space at the Low Level Waste Repository in Cumbria, preserving valuable space at a facility that was established in 1959 as the UK's only disposal route for LLW.

In recent years, Dounreay has constructed a facility to take waste from its decommissioning activities, but LLWR remains the key national asset for waste producers, including the NDA's English and Welsh sites.

LLWR has been at the forefront of introducing measures to make greater use of sustainable waste routes, acting as a broker for the many organisations who produce LLW in the UK. This follows the publication in 2010 of the UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry, the aim being to reduce the amount of containers sent to LLWR.

As the strategy is implemented more widely, increasing numbers of non-NDA organisations are also taking advantage of LLWR's brokering services. Last year, the increases were dramatic: 489 tonnes of metallic waste (39 tonnes in 2014/2015), 177 cubic metres of combustible waste (5 cubic metres in 2014/2015) and 1,878 cubic metres of Very Low Level Waste (975 cubic metres in 2014/2015) were successfully diverted from the repository via the LLWR framework.

The total volume saved since 2010 has now reached the equivalent of 5,484 half-height ISO containers.

In the last financial year, the number of containers (equivalent to half-height ISO containers) disposed of at the repository fell to 171, a reduction from 193 the previous year. During the years before the 2010 Strategy introduced a new approach, the average annual was around 700. Early this year, the Strategy was reviewed and updated, retaining the focus on implementation of the waste hierarchy with additional emphasis on developing a more integrated framework, which includes other radioactive wastes and also optimises the management of wastes at the boundary between LLW and ILW.

Also during the year, the site's most recognisable building, the Direct Grouting Facility, was returned to service following a  $\mathfrak{L}1.8$  million upgrade.

A major milestone for the LLWR during the year was the Environment Agency (EA) decision to approve a key Environmental Safety Case permit that will enable many more decades of disposal. The EA decision followed seven years of work by LLWR to demonstrate that every aspect of the facility can continue to operate safely. An earlier permit granted in 2006 allowed for disposal at Vault 8 but left Vault 9, completed in 2010, and any future vaults, with permission for storage only. A planning application has now been submitted to Cumbria County Council seeking to enable the construction of two new vaults (10 and 11) plus an extension to Vault 9. LLWR hopes eventually to construct up to 14 vaults to accommodate all the decommissioning waste forecast to arise as sites are dismantled in the decades ahead.

#### **Critical Enablers**

#### **Supply Chain**



The NDA estate supply chain awards recognise the vital contribution of suppliers to the UK's nuclear clean-up mission.

The NDA continues to strengthen its support for measures to encourage a dynamic, innovative supply chain as a critical part of mission delivery across the estate.

Measures introduced by the NDA and its SLCs over recent years are working well, while there is a growing emphasis on removing inefficiencies in our own processes to ensure the estate remains attractive to potential contractors. This year has also seen more emphasis on key supplier management and engaging with the NDA's top suppliers.

In line with government aspirations for economic growth and support for businesses, the NDA is focused on improvements to its collaborative procurement strategy while also aiming to increase opportunities for SMEs.

The NDA is now in its 11<sup>th</sup> year and has spent almost £14 billion in the supply chain during that time, with a steady annual increase over the majority of this period. Spend in the supply chain this year of £1.8 billion is consistent with the level expected annually throughout the current parliament. Sellafield will continue to be the dominant client within the estate for the supply chain which reflects the complexity and a priority of the site.

The collaborative procurement initiative launched seven years ago to combine demand in goods and services across the estate is in the process of being updated to cover the period up to 2020. The Shared Services Alliance (SSA) which drives this collaboration across the estate is implementing a new more centrally driven model to further drive efficiencies and standardisation. Collaborative procurement now accounts for almost a quarter of total estate supply chain spend and has recorded savings of £86.9 million this year.

The approach is in line with Government objectives for securing savings and efficiencies by approaching procurement collaboratively where practicable. The SSA will give greater focus on contract management and exploring different ways to deliver maximum value by moving towards a cost out model. The SSA includes all SLCs as members, as well as NDA subsidiaries RWM, INS and DRS, and the National Nuclear Laboratory. Closer links with the Crown Commercial Services continue to be developed, with the SSA having an increasing involvement in the placement of contracts for use by other public sector clients as well as the NDA Estate, focussing on those who procure nuclear-related services.

The first NDA Estate SME Action Plan, published early in 2013, exceeded its target of securing a 20% of estate spend with smaller businesses by 2015, recording 22%. The government has set itself a new challenge to further increase the spend with SMEs to 33% by 2020. To help support the delivery of this figure, all departments and now the NDA have agreed targets. The NDA is aiming to achieve a target of 31%, with annual interim targets set to monitor performance. This challenging target includes indirect spending by contractors employing SMEs as well as direct contract spend by the NDA and its SLCs.

Initiatives for smaller suppliers include the mentoring scheme that pairs larger or experienced smaller organisations with SMEs to share guidance and expertise. Piloted in 2014, the scheme re-opened for 2016 after proving successful in helping SMEs to develop a greater understanding of working within the NDA Estate and potential procurement opportunities. The concept arose from discussions within the SME Steering Groups which were among the measures introduced to provide smaller suppliers with support.

A key activity continues to be the successful NDA Estate Supply Chain Event, which in 2015 attracted the highest-ever attendance, with 1,500 delegates and exhibitors. Now one of the largest events of its kind in Europe, the collaborative event is organised jointly by the NDA and its SLCs with a particular focus on providing networking opportunities for smaller businesses and enabling face-to-face discussions with representatives from the NDA estate and other government departments. The Ministry of Defence (MOD) and other Government bodies are also engaged.

#### **Skills**



The NDA estate has supported 1,165 apprentices since 2005.

High levels of skills and expertise are required for many more decades as the NDA's sites continue to progress decommissioning activities.

Although the ultimate goal is the closure of sites, the clean-up mission will still be under way in the next century, requiring a sustained programme of investment in education and training. The retirement of many of the UK's nuclear workers in the next few years will create a skills shortfall while new build developments are also likely to be seeking professionals in all sectors.

The NDA is committed to retaining and developing skills at all levels, from school-leavers and graduate

trainees to highly specialised post-graduate researchers.

In line with government's drive to enhance vocational training, the NDA and its SLCs have strengthened their commitment to apprenticeships, continuing a long tradition of offering practical onthe-job learning in a wide range of engineering disciplines while also developing newer skills such as project management. More than 1,300 apprentices have been trained across the estate since 2005 when the NDA was established.

The Sellafield site, where the bulk of NDA apprentices are trained, has increased its intake by almost 400% since the NDA's inception and has more than doubled since 2010. In September 2015, a record 189 apprentices were recruited, with options for 17 different courses. Included among the intake, for the first time, were 18 degree-level apprentices who form part of the government's new drive to attract high-calibre school-leavers into practical, vocational engineering degree courses.

Sellafield Ltd is also at the forefront of working with nuclear partner companies to establish a Nuclear Trailblazer programme which is developing new employer-led standards. It has recently been recognised at the National Apprenticeship Award 2015 for its outstanding contribution to skills development in the North West, collecting a 'highly commended' title and earning a place on the 'Top 100 Apprenticeship Employers' list.

Back in 2005, 10% of NDA estate apprentices were female, a proportion that has now risen to 27% and is more than five times the national average of 5% in industrial sectors.

Dounreay celebrated 60 years of training apprentices in 2015, and took on 23 young people, while Harwell, one of the NDA's smaller sites, has recruited two electrical apprentices for the first time in many years. LLWR has also taken the decision to recruit apprentices, with a total of nine now in training. Magnox sites, meanwhile, took on 25 advanced-level apprentices between 2012 and 2015.

The NDA's support for education, particularly in technical, engineering and nuclear skills, is reflected in partnerships with colleges across the country and has helped to deliver: the Cumbrian nuclear training centre Energus; the Construction Skills Centre at Lakes College in Cumbria; the Engineering Skills Centre at North Highlands College; the Energy Skills Centre at Bridgwater College in Somerset; the Energy Centre at Coleg Menai; and the Coleg Meirion Dwyfor CaMDA Engineering Skills Centre in Dolgellau.

The NDA is also working alongside a range of nuclear employers to support newly launched University Technical Colleges (UTCs) in different parts of the UK. UTCs, pioneered by the government, combine work-focused technical training with academic studies for students aged 14-19. A key feature is sponsorship by local universities or providers of further education and, equally, partnership with businesses to provide valuable workplace experience and guidance on relevant course content.

In Cumbria, the Energy Coast UTC has been taking students since 2014, the Warrington UTC is set to open in September 2016, while Berkeley Green UTC will open in 2017 on land formerly occupied by the old NDA-owned nuclear labs adjacent to the Berkeley decommissioning site.

At the post-graduate level, the NDA's joint funding agreement with the University of Manchester to construct and develop the £20 million world-leading research facility Dalton Cumbrian Facility (DCF) concludes in October 2016. Since its establishment the facility has attracted more than £40 million of additional research funding from both public and private sectors and established research collaborations with over 15 different universities.

The DCF, which opened in 2011, offers pioneering research into radiation science and nuclear engineering decommissioning, while also supporting access for academia to the research facilities at the NNL Central Laboratory on the Sellafield site. So far, 13 universities and 13 companies have taken advantage of these opportunities.

The DCF's unique features include two particle accelerators and a high dose rate gamma irradiation facility that enable safe, controlled studies into the effects of radiation on various materials and chemical processes. Under a 12-strong academic team and with dedicated technical support staff, more than 50 PhD projects have been supported by the DCF and a range of technology developed through the DCF is already being trialled on the Sellafield site.

The NDA was also involved with the launched of the Nuclear Transition Framework, which operates nationwide as an informal network of information-sharing organisations who are committed to retaining and optimising vital skills across the whole nuclear sector. Led by the NDA, partners include DECC, Cogent, National Skills Academy for Nuclear (NSAN), Office for Nuclear Regulation (ONR), EDF Energy, Horizon, Sellafield Ltd, Magnox Ltd and Springfields, Lloyds Register, AMEC Foster Wheeler, Nuclear Technologies, Jacobs, NNL, Rolls-Royce and the trade unions.

The framework builds on other initiatives including the award-winning *nucleargraduates* programme which has grown into one of the most highly rated training schemes in the UK since being launched by the NDA in 2008. Now administered by Energus with support from 20 public and private-sector partners, the two-year course provides high-level comprehensive training and placements at diverse nuclear organisations. Almost all those who complete the course find employment in a related field.

#### Research & Development (R&D)

The NDA's annual expenditure on research and development (R&D) is typically more than £85 million, combining direct investment by the NDA and spending by the SLCs. This reflects the vital role of innovation in solving some of the complex, unique challenges that arise as historic nuclear facilities are taken apart.

The bulk of the investment is allocated to projects undertaken by the SLCs as part of their decommissioning activities, and addresses specific issues. Most of this site-focused funding is directed towards the technical challenges at Sellafield, the NDA's priority site which houses the highest hazards and most complex problems.

The NDA has oversight of this work from a strategic perspective to ensure the proposals are robust and, where possible, identify other sites where there is technology good practice that can be shared and innovations that could be deployed or adapted.

One recent site-related success is the radical breakthrough in understanding the behaviour of ILW at Sellafield's MSSS. The four-year study was led by the NDA, Sellafield Ltd and the National Nuclear Laboratory, with academics from the universities of Bristol, Leeds and London South Bank. Its findings are set to revolutionise the management of ILW, not just at the MSSS but at other nuclear facilities world-wide. The research demonstrated that previous assumptions about reactivity were excessively pessimistic and a highly engineered 22-step retrieval and treatment



Research, supported by NDA, led to a breakthrough in the management of ILW storage at Sellafield.

process could be replaced by a far simpler three-step solution which would be both faster and cheaper. This highlights the role that fundamental understanding of technical issues plays in delivering progress.

Separately, the NDA invests approximately £5 million per annum directly into early-stage projects, feasibility studies or ongoing technology development, either through university-based work or in the supply chain. Working with partner organisations in both the public and private sector to leverage maximum funding, these projects have potential for future use across multiple sites, in support of the UK-wide decommissioning strategy and across all sectors of the nuclear industry. The NDA R&D Portfolio is particularly valuable in enabling concepts to be explored and further developed, while also encouraging collaboration between individual projects or researchers who may wish to pool resources or combine technologies, in particular from outside the decommissioning sector.

One of the novel technologies now reaching maturity after early NDA support is the Lasersnake 2, a delicate snake-like robot arm that can slither through small gaps into radioactive environments, equipped with attachments to measure radioactivity, cut up equipment, produce 3D images and more. The initial NDA investment enabled laser-cutting techniques to be adapted from the auto industries, where it is widely used, to a nuclear environment. This was followed by additional funding from collaborative initiatives and further collaboration with different partners to produce the versatile and highly flexible Lasersnake 2, which is being trialled for deployment at Sellafield.

Collaboration with other R&D funders, in particular Innovate UK, is key to maximising our investments. Among the other public organisations working with the NDA are: DECC, Research Councils UK, the Engineering and Physical Research Council and UK Trade & Industry (UKTI).

An early investment by the NDA into radiation-mapping software began a collaborative journey that led to development of an aerial drone, named Riser, that is able to fly inside contaminated facilities carrying the lightweight equipment to build an accurate high-definition 3D picture of contamination. Riser was recently tested inside Sellafield's Windscale Pile Chimney where the 1957 fire left high levels of radioactive contamination. The drone technology and N-Visage software system, brought together as Riser, received funding support via Innovate UK and the NDA.

In a further demonstration of the value delivered by the NDA's investment, the N-Visage laser scanner and gamma imaging system has been successfully used to assess the distribution of radioactivity inside the damaged Fukushima power station, thus enabling UK businesses in supporting international opportunities.

A further aim of R&D funding is to a build a robust, sustainable UK supply chain that enables both highly specialised small businesses and larger companies to flourish in the home market and also overseas, through the development of innovative products and services.

During the last financial year, the NDA has continued its partnership with Innovate UK through a £500,000 contribution to the Energy Game Changer initiative which opened in March, seeking proposals from innovative smaller businesses who currently operate outside the energy sector but whose ideas might have potential for adapting to use in the field of energy, including oil, gas and nuclear. The £2 million initiative encourages collaboration between SMEs and partner organisations of any size, with up to £25,000-£100,000 available for individual projects.

Similar collaborative programmes over the last four years led to support worth £31 million for a broad range of projects covering all aspects of nuclear including new build, current operations and decommissioning. Around 40 of the projects were recently showcased at an event in Manchester to demonstrate the progress achieved. Among those on show were underwater treatment for contaminated pond water, sludge dredging, a robotic spider, waste immobilisation, water monitoring and characterisation and remote welding inside pipework.

The NDA also supports the development of future expertise through its annual £500,000 university bursary fund for individual researchers and additional shared funding for a range of other PhD projects, as well as in-kind support for various post-graduate nuclear research programmes. This is important in supporting and developing the next generation of technical specialists to address our technical challenges.

#### **Socio-Economics**

Communities surrounding the estate's sites continue to benefit from a range of socio-economic initiatives supported by the NDA and partner organisations. In regions where its nuclear sites have been a dominant employer, the NDA is committed to working with other organisations on regeneration and employment schemes that contribute towards a sustainable economic future.

Last October marked the fifth year of the Copeland Community Fund, set up to recognise the community's unique role in hosting the national Low Level Waste Repository (LLWR) near Drigg in West Cumbria. The NDA contributed an initial  $\mathfrak{L}10$  million to the Fund, and makes an annual  $\mathfrak{L}1.5$  million payment that will continue for every year of the repository's operation.

More than 195 projects in Copeland have been sponsored and a further 166 community groups supported since the Fund opened in 2010 to provide grant funding to local projects that support and improve community life.

Among the initiatives launched during the financial year was the Cumbria-based Centre of Nuclear Excellence (CoNE), a grouping of public and private-sector organisations aiming to ensure the region is recognised globally as the UK's centre of nuclear excellence.

Bringing together the industry and its supply chain, local authorities, academia and training providers, CoNE wants to maximise the impact and opportunities of Cumbria's unique network of nuclear capabilities and strengths. This can both help build success in delivering nuclear missions, and power economic growth and investment in Cumbria, the North West, and throughout the UK, consistent with Cumbria's Local Enterprise Partnership and Government policies.

In a further move to support the region's nuclear supply chain, Sellafield Ltd has agreed a procurement framework contract that is aimed at delivering benefits for the community over 10 years. The Decommissioning Delivery Partnership (DDP) framework is potentially worth up to £500 million over the contract period and will, for the first time, require contractual commitments from contractors on providing jobs, apprenticeships and work for small and medium-sized businesses.

The NDA also supports a range of individual projects around the country. At Magnox sites, the majority of NDA investment is channelled through the Magnox Socio-Economic Scheme, which is now in its fourth year of operation. Priority areas for support are the communities adjacent to the first sites that will enter Care and Maintenance, namely Bradwell, Trawsfynydd and Dungeness A. During 2015/2016, almost £900,000 was awarded to 120 organisations, helping to create: 89 new jobs, 2 new businesses, and 4,436 training opportunities. The investments also helped to secure £31.6 million of funding from external partner organisations.

One of the schemes supported by the NDA and Magnox Ltd over the past year is the experimental tidal and wave project off the coast of Anglesey, the West Anglesey Demonstration Zone, where the £300,000 investment will support licensing and permitting work being carried out by the project managers Menter Mon. The Anglesey zone was one of six demonstration zones identified by the UK government which, for the first time, will enable local organisations to manage and sub-let parts of the

seabed to a range of wave and tidal current developers. The NDA also agreed to commit £285,000 towards the Gwynedd Arloesi project, a three-year initiative that aims to provide a boost to the rural economy of Gwynedd by sponsoring local pilot projects. Mentor Mon has been appointed to deliver the project under the European Union's (EU) Rural Development Programme.

The NDA also contributed £300,000, via the Magnox scheme, to a £4 million project to reopen a historic marine studies centre on the



NDA contributed over £200,000 to buy equipment for the engineering skills centre at Berkeley.

small island of Cumbrae, close to Hunterston A site. The centre offers fieldwork experience to all ages and provides research facilities for universities and environmental professionals. Also in North Ayrshire, the NDA has made the first payment towards the Youth Employment Scheme (YES), a three-year project aimed at enhancing employment opportunities for young people and supporting local business growth through offering a six-month wage subsidy to local employers. Managed by North Ayrshire Council, the NDA is contributing £250,000 towards the overall project costs of £1 million.

The project will target employment in key economic sectors, beginning with the hospitality industry before moving into engineering and manufacturing, care and retail.

Further south, the new college campus being constructed on the site of the former Berkeley research labs was awarded just over £200,000. South Gloucestershire and Stroud College will use the funds to equip the GREEN (Gloucestershire Renewable Energy and Nuclear) Skills Centre, one of the facilities on the campus which is dedicated to science, manufacturing and digital technologies.

At Dounreay, the NDA is working with the Scottish Government to support the Developing the Young Workforce initiative which aims to bring businesses, schools and colleges together to ensure young people develop workplace skills long before they start to seek employment.

The NDA has supported both Wick and Scrabster harbours to develop better, more modern, infrastructure and this has led to business growth at both locations. Wick harbour was identified as the preferred operations and maintenance base to support an extensive offshore renewables project in the North Sea which will bring around 200 new jobs to the town.

Under an agreement between the NDA and DSRL, a £500,000 annual fund is available to support job creation and economic development opportunities. Some of this money has gone, alongside direct funding from the NDA, to support the Caithness Chamber of Commerce's Business Support Programme that gives advice to fledgling enterprises. Among the more successful of the new business starts is the John O Groat Brewery. After receiving help with the managerial aspects of establishing their business the John O Groat Brewers are now increasing production in order to supply several styles of beer to the local and national market. The company's aim is to introduce bottled ales and reach wider domestic and wholesale markets. A variety of other companies received help to get up and running including a cinematographer, a graphic designer, a pest control company and a firm making specialist hoof protection for horses. Horsecrocz has made a steady growth in sales over the year and is now exporting its product from Caithness to Australia and the US.

DSRL has recently made progress with work to gain local socio-economic benefit through its subcontracting work, with higher value contracts requiring considerations such as traineeships, community support and making opportunities for young people.

#### **Information Governance**



Construction of Nucleus - The Nuclear and Caithness Archive continues

Construction of Nucleus - The Nuclear and Caithness Archive in Wick is now well under way after work started in summer 2015.

The £21 million archive, located opposite Wick Airport in northern Scotland, is due to open in 2016 and will house more than 70 years' worth of historic information from across the UK's civil nuclear sector. Much of the structural work is now complete, while internal fittings are now being installed inside the bold, triangular-shaped building.

A huge volume of records are destined for the archive, including up to 30 million digital records and material from hundreds of thousands of boxes that

have accumulated over the decades at Sellafield, Dounreay, Magnox sites and other nuclear facilities. The NDA sites are already in the process of sifting through stored records in detail before transfer, where appropriate, to the archive.

Wick was selected for the project as part of the NDA's commitment to help support local economies in areas affected by closure of its sites. As owner of the sites, the NDA is also responsible for preserving all relevant nuclear records and ensuring they are made available in line with legislation on public information.

A local collection of historic material dating from the 15<sup>th</sup> century, the Caithness collection, will also be housed at the archive after outgrowing its current location, along with Highland Council records. The archive is part of a wider NDA initiative, the Information Governance Programme (IGP), which aims to ensure that all kind of information, knowledge and professional expertise is retained and managed effectively across the estate. The IGP involves all SLCs, subsidiaries, regulators and relevant government departments.

Work has commenced on the design of an electronic knowledge management hub, Crucible, which will enable people and organisations to collaborate and share knowledge across the estate in a single, secure platform.

Information risk management is a key aspect of the IGP. This year, all parts of the NDA achieved the standards specified by DECC through the Information Assurance Maturity Model (IAMM), a mechanism that measures effectiveness in managing the confidentiality, integrity and availability of information. The NDA has now defined its approach to managing information risk, through a scale of behaviours to be adopted when making key decisions. This has been issued across the estate as an information risk management policy.

# Health, Safety, Security, Safeguards and Environment (HSSSE) Report

#### **SLCs**

HSSSE is one of our critical enablers. The objective, as expressed in the NDA Strategy is:

To reduce the inherent risks and hazards of the nuclear legacy, by proportionate application of contemporary standards and improving environment, health, safety and security performance across the estate.

In carrying out its functions, it is the NDA's duty to have particular regard to relevant Government policy, the need to safeguard the environment and protect people from risks to their health and safety, and the need to preserve nuclear security. The NDA has an additional duty to secure the adoption of what it considers good practice by the persons with control of designated installations, designated sites and designated facilities.

The NDA sets high standards for environment, health, safety and security performance, and we expect relevant duty holders to meet the expectations of the safeguards regulator, Euratom. All events, irrespective of their outcome or severity, are investigated in order to identify learning and prevent reoccurrence.

While operational matters are the responsibility of the legal duty holders, we hold SLCs and subsidiaries to account through our governance arrangements, which include targeted assurance of processes and arrangements made in the interests of environment, health, safety and security.

Nuclear Safety - INES 1 events

Number of INES events by SLC	2015/ 2016	2014/ 2015
Magnox	3	5
RSRL	n/a	0
DSRL	1	3
LLWR	0	0
Sellafield	2	0
Total	6	8

The International Atomic Energy Agency's (IAEA) International Nuclear and Radiological Event Scale (INES) aids communication and understanding between the technical community, the media and the public on the safety significance of radiological events. While the number of INES events serves as a useful comparator, an INES rating is not in itself a reliable indicator of the severity of an event, because INES is a communication tool, not an objective scientific scale.

In 2015/2016, our sites reported six INES events, all at Level 1 (Anomaly), which is the lowest level of the seven point INES scale. We also monitor nuclear and radiological events that do not attract INES ratings. The rate of occurrence of these events continues to be lower than in previous years.

Conventional Safety – RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations)

Safety Injuries by SLC	2015/ RIDDOR Specified Injuries	2016 ( > 7 day LTA)	Total	2014/2 RIDDOR Specified Injuries	2015 (> 7 day LTA)	Total
Magnox	5	4	9	3	4	7
RSRL	n/a	n/a	n/a	0	0	0
DSRL	1	3	4	0	0	0
LLWR	0	0	0	0	0	0
Sellafield	7	8	15	7	6	13
Total	13	15	28	10	10	20

In 2015/2016, a total of 28 Specified Injuries and Lost Time Accidents were reported to the regulators, under RIDDOR. This is higher than the total of 20 for 2014/2015, but is not a significant increase for the Estate as a whole.

Slips, trips, falls and strains still cause the majority of lost time accidents, whereas injuries that are more serious remain rare. We were disappointed to note an increase in the frequency and severity of injuries across the Estate during 2015/2016, and an increase in the number of less serious injuries. Whilst it is unlikely that a single cause will be identified for this trend, we have stressed the importance to duty holders of the need for high standards of safety at all times and the need to improve current performance to meet our expectations.

A reliable measure for conventional safety performance across sectors is the rate of injuries or cases of ill health per 100,000 employees. The average rate for the SLCs in 2015/2016 was 118 per 100,000 employees. For comparison, the Health and Safety Executive's (HSE) most recently published data (from 2014/2015) indicates a UK rate of 293.

#### Sickness absence

Sickness absence rates (days per employee per year)	2015/2016	2014/2015
Magnox	5.91	5.66
RSRL	n/a	8.63
DSRL	9.21	7.67
LLWR	6.10	6.80
Sellafield	10*	9.70
Weighted average	9.00	8.66

<sup>\*</sup>provisional value

The weighted average SLC sickness rate is the number of days lost to ill health per year per employee, and includes cases of long-term (greater than 20 consecutive days) sickness absence. The rate for our Estate increased slightly this year, to 9.0 days. The increase in overall absence rate is attributable to a small number of people on long-term absence. The underlying short-term absence rate is between 3.5 and 6 days per employee per year.

We benchmark sickness absence against both the public and private sectors, and absence rates across the sites in the NDA Estate are similar. For comparison, the UK industry average, as recorded by the Chartered Institute for Professional Development in 2015 was around 6.9 days per employee per year.

#### Protection of the environment

The majority of events reported this year were technical breaches of permits and authorisations, and had no impact on the environment. Examples of this type of event included errors in the reporting of data to the environment agencies, and minor non-compliances with management arrangements.

- At Dounreay, 8m<sup>3</sup> of process ash was released from the low-level waste grouting facility.
- At Sellafield, there was a small release of oxides of nitrogen (NO<sub>X</sub>) from the Magnox reprocessing plant and later in the year, a release of nitrites to the sea from THORP.
- At LLWR, routine inspection identified a damaged effluent pipeline. No pollution resulted from this event, and the pipeline was repaired, and returned to service.

We noted a number of environmental and sustainability initiatives, including the recruitment of specialist staff, and improvements in the management of both resources and wastes.

#### Security

Ensuring that the NDA Estate is secure is of paramount importance to confirming nuclear safety and meeting UK strategic goals for security.

This year, working with other stakeholders and especially the Regulator, our focus has been to support, assure and enable major enhancements to our sites with a focus on Sellafield and LLWR, and the project to construct Nucleus - The Nuclear and Caithness Archive building at Wick. Specifically, we have:

- supported the work to challenge and rationalise Sellafield Security and Resilience Technical Cluster in order to ensure the end product provided value for money whilst still delivering fit for purpose Security enhancements
- worked with Sellafield Ltd to prioritise the Sellafield Cyber Project in order to ensure that the work that reduces cyber risk most is accorded the highest priority
- provided ongoing support to the LLWR Security Enhancement Programme
- worked closely with NDA Archives Ltd to define the security requirement (physical, cyber, personnel and procedural) for the archive at Wick. At the same time, we have provided assurance to ONR that the Archive will be an appropriate environment for the storage and handling of Sensitive Nuclear Information
- led work to identify short and medium cyber-security enhancements to the security of the cross-Estate IT contract
- provide cyber-security specialist support to the new NDA Cyber Resilience Programme.

#### **Nuclear Safeguards**

Accounting for our civil holdings of nuclear materials ('Safeguards') is essential to the Government's non-proliferation commitments. The NDA maintains oversight of SLC safeguards performance and during the year has supported European Atomic Energy Community (Euratom) and ONR Safeguards visits to Sellafield and Dounreay. Euratom Safeguards Directorate is part of the EU's arrangements to ensure that nuclear materials are not diverted from their intended peaceful uses.

At Sellafield Euratom was generally satisfied with progress being made against inventory verification and with Sellafield Ltd's commitments to improve support for their on-site laboratory.

At Dounreay safeguards performance was satisfactory with no negative observations. Euratom was also generally satisfied with updates on consolidation and waste management including plans for shaft and silo retrievals.

#### **Regulatory matters**

The SLCs continue to engage with the nuclear regulators on operational, decommissioning and strategic issues. These include the acceleration of projects and ways of more effective working.

#### **NDA**

#### Health and safety performance

As well as our obligations as owners of nuclear sites, we are directly responsible for the health and safety of our own employees.

The NDA had no RIDDOR reportable events in the year. Seventeen health and safety incidents were recorded internally. We also recorded a number of near misses and minor injuries, some of which required first aid treatment. All recorded events were investigated by managers, and appropriate actions taken to prevent reoccurrence.

The average sickness absence of our employees was 6.0 working days absence per employee, which is slightly lower than the national average of 6.9 days.

#### **Driving on company business**

Driving is one of our most significant health and safety risks. This year, NDA employees drove a total of 704,344 miles on business, an increase of around 5%. We have taken steps to control this risk. Employees are encouraged to use public and business-provided transport (including shuttle buses between sites), and those making essential car journeys are supported by a training programme, which includes driver safety assessment and techniques for safer winter driving.

#### Health and Wellbeing

As part of our continued commitment to the health and wellbeing of our employees, health and wellbeing awareness campaigns were delivered to our staff, including stress awareness and general health initiatives. Specific training and support has been provided to staff and their managers, on request. We also provide a confidential Employee Assistance Programme (EAP), to help employees with personal problems that might adversely affect their health, wellbeing or work performance.

#### **Consultation with employees**

The NDA Health, Safety & Environment Committee met regularly through the year to discuss matters that may affect the health, safety and wellbeing of staff. We also arranged for RoSPA to deliver training to our safety representatives.

#### Security

The NDA reaccredited its internal networks in 2015 and the annual health check of the NDA's cyber security was successfully completed. The NDA has been certified again in 2016 as compliant with the requirements of Cyber Essentials Plus.

The NDA completed a further Security Culture Survey using Centre for the Protection of the National Infrastructure's (CPNI) Secure 3 Assessment Tool. Although participation was not mandatory the percentage of staff completing the survey was high (73%) and in itself very encouraging. The results in all sections were above the national average. In 2016/2017, we will use these results to deliver tailored security awareness education and develop a computer based training package.

There were no major or serious security incidents of note.

#### **Environmental Performance and Sustainability**

The NDA operates an Environmental Management System to ensure that we operate within our stated environmental policy, associated objectives and targets, and have processes for monitoring and controlling our environmental impacts. Objectives and targets are set to maintain continual improvement in environmental performance across the organisation and to raise awareness of environmental issues.

A summary report explaining the NDA's contribution to sustainability performance under the Greening Government Commitments (GGC) and our own environmental management system is provided below with a more detailed Sustainability report for 2015/2016 available on our website.

The NDA subsidiaries and wider nuclear estate are outside this reporting boundary, and have been exempted from the reporting requirements by the Sustainable Development in Government Exemption Panel.

Area	2015/16	Overall performance since 2009/2010	Performance Against Target
UK based Greenhouse Gas (GHG) emissions	2.9% increase	35% decrease	Achieved
Total GHG emissions	2.8% increase	41% decrease	No target
Office Waste	19% increase	18% decrease	Achieved in 2014/2015
Office Water	2.4% decrease	16% decrease	Achieved
Office Paper	3.4% decrease	70% decrease	Achieved
Domestic Air Travel (flights)	33% decrease	72% decrease	Achieved

#### Notes:-

The GGC targets cover five year periods with a baseline of 2009/2010. The first suite of targets was achieved in 2014/2015. For 2015/2016, whilst Government developed its new suite of targets, we continued to monitor against the existing ones. New targets have been set up for 2016/2017 to 2020/2021 with 2009/2010 remaining as the baseline.

For 2015/2016 there has been a small increase in GHG emissions due to air conditioning refrigerant losses. In addition, there has been a more significant increase in waste generation, largely due to office moves and reorganisations generating waste electrical and electronic equipment and office equipment (most of which was recycled). This means that having met the GGC target in 2014/2015, we failed to meet the same target in 2015/2016. We will need to ensure greater focus in these areas in coming years.

## **Accountability Report**



## **Directors and Executives**

#### **Non-Executive Directors**

#### Stephen Henwood CBE - Chairman



Stephen was appointed Chairman of the NDA on 1 March 2008 and was re-appointed in March 2014 for a further three years. A Chartered Management Accountant, his career has included senior financial and operational roles with Tate & Lyle plc and BAE Systems.

He left BAE Systems at the end of 2006 and has undertaken a number of Non-Executive appointments. In February 2014 Stephen was appointed Chair of the Aerospace Technology Institute (ATI).

He was made a Commander of the Order of the British Empire (CBE) in the New Year Honours list in 2013, in recognition of his services to the nuclear industry and charity.

**Tom Smith** 



Tom is a member of the Audit and Risk Assurance Committee.

Tom is Chairman of Angel Trains Group Ltd and a Non-Executive Director of Highways England. He was previously Chairman of the Association of Train Operating Companies and has also worked, at Managing Director level, for the transport company the Go-Ahead Group plc, the M6 toll motorway operator Midland Expressway Ltd and held various senior positions with Trafalgar House plc.

An Oxford chemistry graduate, he started his career in the Diplomatic Service, working in London, Hong Kong and Beijing, before moving into industry, where he quickly specialised in major infrastructure projects.

Ken McCallum



Ken is a member of the Remuneration Committee.

Ken was appointed Non-Executive Director to the NDA in March 2014. Ken was, until then, Shareholder Executive's Director responsible for the governance of the NDA.

He joined Shareholder Executive in September 2012 to head the Information Economy Directorate.

Ken is a civil servant with experience in a range of roles, on subjects including international relations, cyber security and the London Olympics.

#### **Volker Beckers**



Volker is Chair of the Audit & Risk Assurance Committee.

Volker graduated from Cologne University in Economics/Business Administration. With more than 20 years' senior experience within the energy industry, he has a comprehensive knowledge of European energy markets.

Volker was Group CEO, RWE Npower plc until the end of 2012 and prior to this, its Group CFO from 2003 to 2009. He has worked in a variety of trade and industry bodies, including the CBI President's Committee, on the Board of the German-British Chamber of Industry & Commerce, and since 1999 as Deputy Chair of the Executive Commercial Management Committee at the German Association of Energy and Water Industries (BDEW) and was also member of the Executive Committee of UKBCSE (now Energy UK). Since 2009 he has chaired the Business Energy Forum. He holds a number of non-Executive directorships and chairmanships.

#### **Evelyn Dickey**



Evelyn is chair of the Remuneration Committee.

Evelyn joined Severn Trent's HR function in November 2006 and was appointed HR Director in 2010. She has extensive HR experience leading design and delivery of major change programmes, business restructuring, employee relations, resourcing, executive remuneration, organisational capability and performance management initiatives. Before joining Severn Trent Evelyn worked in HR consultancy and as HR Director (HR Operations) for Boots the Chemist.

Evelyn holds a BSc with combined Honours in business, society and government.

#### Janet Ashdown



Janet is the chair of the Safety & Security Committee and a member of the Audit & Risk Assurance Committee.

Janet holds current Non-Executive Directorships with SIG plc, Coventry Building Society and Marshalls plc. She is also Chair of the charity 'Hope in Tottenham'.

Previously Janet worked for BP plc for over 30 years holding a number of positions in the UK and globally across the activities of fuel supply, manufacturing, oil trading and retail marketing. She was a senior leader in BP and her last role was running BP's UK retail and commercial fuel business. Janet was, until the end of 2012, Chief Executive Officer of Harvest Energy Ltd.

#### **Rob Holden**



Rob is a member of the Remuneration Committee and the Safety and Security Committee.

Rob was appointed Chair of High Speed 1 in 2011. He is the former CEO of Crossrail and of London & Continental Railways (LCR). Between 1999 and 2009 Rob led the LCR team in a series of transactions that secured the future of the Channel Tunnel Rail Link (later renamed High Speed 1). In addition to his chairman's role Rob is a Non-Executive director of Viridor Ltd, a waste management and recycling business. He also advises on long-term projects in the rail and defence sectors. Rob participates on PwC's infrastructure advisory board and has recently worked for the Cabinet Office's Major Projects Review Group.

Rob qualified as a Chartered Accountant with Arthur Young in Manchester before moving to the Vickers Shipbuilding Group early in his career.

#### **Executive Directors**

#### John Clarke - Chief Executive and Accounting Officer



John has held a number of business leadership roles during his 30 years working in the nuclear sector. He joined the NDA Board in 2008 from International Nuclear Services Ltd where he was Managing Director. Prior to that, he spent eight years as part of the Sellafield Ltd Executive team, in operational and environment, health and safety roles.

A Chartered Engineer and Fellow of the Institution of Chemical Engineers and a Fellow of the Nuclear Institute, his early career involved a range of roles in the design, development, commissioning and operation of nuclear fuel processing plants.

John took up the position as the NDA's Chief Executive and Accounting Officer in April 2012 having previously worked on commercial and business planning issues, during which he played a leading role in the restructuring of the NDA in 2011.

#### **David Batters - Chief Financial Officer and Programme Director**



David is a Chartered Management Accountant who, as Chief Financial Officer (CFO) is responsible for the Finance Function (Finance, Insurance, Pensions, Business Planning and Internal Audit). Additionally he is the Executive responsible for DSRL, LLWR and Magnox sites with respect to performance and contract management. He joined the NDA in October 2010 as CFO and from December 2011 to April 2012 he was the Accounting Officer and Acting Chief Executive Officer of the NDA.

His appointment with the NDA followed more than 20 years with BAE Systems and predecessor companies in which he held a variety of roles primarily in finance including Mergers & Acquisitions, Planning & Analysis, Reporting, Project Accounting and as Finance Director of a number of businesses.

#### Pete Lutwyche - Sellafield Programme Director



Pete joined the NDA in March 2014 from Jacobs, the US based engineering company, where he spent five years including the role of Vice President of Jacob's UK North business.

Prior to that, he had over 22 years in the UK nuclear industry having held various senior positions within British Nuclear Fuels Ltd (BNFL) including as Chairman of the UK's Low Level Waste Repository and Director of Nuclear Decommissioning and Major Projects at the Sellafield site.

Pete is a Fellow of the Association for Project Management, a member of the Institution of Chemical Engineers and a Board member of Britain's Energy Coast.

#### **Adrian Simper - Strategy and Technology Director**



Adrian joined the NDA in October 2005 from BNFL, where he played a key role in setting up the NDA through the transfer of Assets and Liabilities from BNFL to the NDA and the associated re-structuring of BNFL.

He joined the nuclear industry in R&D at Sellafield. His subsequent career, all in the nuclear sector, has included strategic roles in R&D and technology; project delivery; commercial and finance both in the UK and the US. Adrian has a PhD in mathematics and is a Chartered Mathematician.

Adrian was appointed to the NDA Board in March 2014. He is also Chair of International Nuclear Services Ltd and of Radioactive Waste Management Ltd.

#### **Directors**

#### Kenna Kintrea - Assurance Director



Kenna joined the NDA in 2013 as Head of Programmes and Projects. Prior to joining the NDA, Kenna was Deputy Director of Venues and Infrastructure with the Olympic Delivery Authority (ODA) with responsibility for oversight of the delivery of the ODA's programme of capital works. Kenna also led the operational planning for the ODA's service delivery role during the Olympic Games.

Kenna has extensive experience in the delivery of major projects and programmes. Before joining the ODA Kenna was Director of Quality and Programme Management with Ford Motor Company, having spent the preceding 25 years in a variety of programme management and engineering positions at Ford, in the UK, Germany and the US. Kenna has a degree in Engineering Science, and an MBA and is a Fellow of the Association of Project Management.

Kenna joined the Civil Nuclear Police Authority (CNPA) Board in 2015 and is also a board member of the Major Projects Association.

#### **David Vineall - HR Director**



David was appointed as HR Director in April 2014.

David has a wealth of experience within the industrial sector having held a series of senior HR leadership roles in TATA Steel in Europe, BAE Systems and GEC Alsthom. Roles have included HR Director for the TATA Steelmaking Operations in South Wales and HR Director for Shipbuilding and Support business across Glasgow and Portsmouth within BAE Systems.

David is also Chairman of Energus, a Trustee Director of the Combined Nuclear Pension Plan (CNPP) and Non-Executive Director of The National Skills Academy – Nuclear (NSAN).

#### **Rob Higgins - Business Services Director**



Rob is a Chartered Civil Engineer and a practising solicitor who has been with the NDA since 2009, initially as Head of Legal and Senior Information Risk Owner and, since 2014, as Business Services Director.

Rob is the Chair of NDA Properties Ltd and of NDA Archives Ltd.

Prior to this Rob was Legal Director at Atkins plc with particular interest in major infrastructure projects, PFI and PPP. Before qualifying as a solicitor, Rob worked for 12 years as a construction engineer in the transport and water sectors.

## **Directors' Report**

The NDA is an Executive Non-Departmental Public Body (NDPB) and was established on 22 July 2004 under the Energy Act (2004).

It was created with the primary objective of overseeing and monitoring the decommissioning and clean-up of the UK's civil nuclear legacy.

Since then the NDA's remit has been extended to include the long-term management of all the UK's radioactive waste by finding appropriate storage and disposal solutions.

#### **Accounts direction**

These accounts have been prepared in a form directed by the Secretary of State with the approval of HM Treasury and in accordance with section 26 of the Energy Act (2004).

#### **Directors' interests**

Directors of the NDA must declare any personal, private or commercial interests. A register of such interests is maintained by the NDA.

No director has any personal, private or commercial interests which would conflict with his or her role as a director of the NDA.

The directors who served on the Board during the year to 31 March 2016 and their responsibilities were:

Stephen Henwood	Chairman
Patrick Dixon	Senior Non-Executive Director (term completed on 4 March 2016)
Janette Brown	Non-Executive Director (term completed on 4 March 2016)
Ken McCallum	Non-Executive Director
Tom Smith	Non-Executive Director
Volker Beckers	Non-Executive Director
Evelyn Dickey	Non-Executive Director
Janet Ashdown	Non-Executive Director (appointed 1 June 2015)
Rob Holden	Non-Executive Director (appointed 1 June 2015)
John Clarke	Chief Executive Officer
David Batters	Chief Financial Officer
Pete Lutwyche	Sellafield Programme Director
Adrian Simper	Strategy and Technology Director

#### **External auditors**

The NDA Group's auditor, the Comptroller and Auditor General (C&AG), appointed under the Energy Act 2004, audits the NDA's financial statements. The services provided by the C&AG relate to statutory audit work for the NDA. No fees were paid to the C&AG for services other than statutory audit work.

#### Disclosure of information to the NDA's external auditor

As Accounting Officer, as far as I am aware, the NDA's auditors have been given all relevant information. I have taken all the appropriate steps to establish that the NDA's auditors are aware of that information.

#### **Pensions**

All Authority employees are entitled to join the Principal Civil Service Pension Scheme (PCSPS). Employees within the Group participate in the CNPP, the Merchant Navy Officers Pension Fund and the Merchant Navy Ratings Pension Fund. Details of the schemes are given in note 27 to the accounts.

#### **Equal opportunities**

The NDA believes that every individual has a right to equal treatment and opportunities. Discrimination or harassment on the grounds of gender, age, marital status, ethnic or national origin, religion, sexual orientation or disability will not be tolerated.

The NDA's Equal Opportunities, Harassment, Discrimination and Diversity Policy outlines the rights of all employees as well as the responsibility on all staff to comply with equal opportunities legislation. Furthermore, ongoing monitoring of equal opportunities data is undertaken to ensure compliance with this policy.

#### Learning and development

The NDA continually invests in the capability of its employees to ensure that they are in possession of the skills, knowledge and experience they need to perform their job effectively in order to deliver the NDA's business objectives. Development is delivered through a mix of on-the-job experiences, secondments, performance feedback and observation, and formal training. The latter is delivered through Civil Service Learning, in order to ensure quality and value for money of the procured interventions.

#### **Staff Consultation Group**

Employee involvement is critical to the success of the business and to this end a Staff Consultation Group exists to discuss management and policy matters between staff and management. Staff are also covered by a Collective Bargaining arrangement with Prospect Union. This means that all members other than the Executive are covered by a collective bargaining agreement for pay, holidays and hours as a minimum.

#### Better payment practice

The NDA supports the Better Payment Practice Code in its treatment of suppliers. The key principles are to settle the terms of payment with suppliers when agreeing the transaction, to settle disputes on invoices without delay and to ensure that suppliers are made aware of the terms of payment and to abide by the terms of payment. During the year, the NDA has achieved a 94.94% success rate for payment of suppliers in accordance with terms (2014/2015 – 97.78%). The average number of payment days from invoice date was 28 days and for a valid invoice, (i.e. one with all details correct and entered on the accounting system), 10 days (2014/2015 - 28 days and 6 days). The proportion that is the aggregate amount owed to trade creditors at the year-end compared to the aggregate amount invoiced by suppliers expressed as a number of days is 12.71 days (2014/15 – 6.3 days).

#### Charitable and political donations

During the year, the NDA made charitable donations of £Nil (2014/2015 – £Nil). £Nil of political donations or contributions were made (2014/2015 - £Nil).

#### Investment in socio-economic developments

In accordance with its remit under the Energy Act (2004), during the year the NDA made socio-economic grants of £2 million (2014/2015 £2 million).

#### Research and development

During the year, the NDA directly funded expenditure of £6 million (2014/2015 £6 million) on research and development. In addition, the NDA funded research and development undertaken by our contractors.

#### Funding, counterparty and foreign exchange risk

Although an NDPB, the NDA is also responsible for certain commercial activities and is, therefore, subject to risks and uncertainties surrounding a commercial operation. Its electricity trading activity is subject to price variation risk and was managed by EDF Energy to hedge energy price exposure. The NDA's foreign exchange risk is managed by the site licensees to hedge foreign currency transactions. Details can be found in notes 19 and 22 of the accounts.

#### Quality and environmental performance

The NDA successfully retained certification of ISO9001:2008 and ISO14001:2004 following audits carried out by Lloyds Register Quality Assurance.

#### Summary of results for the period

The summary of the results for the year is as stated in the Financial and Strategic Overview. Transfers to and from reserves are detailed in the Statement of Changes in Taxpayers' Equity.

The accounts show a deficit on the Statement of Comprehensive Net Expenditure of £92,028 million for the year ended 31 March 2016 and net liabilities of £160,561 million on the Statement of Financial Position predominately attributable to the changes in discounting treatment of the Nuclear Provision.

#### Events after the reporting period

On the 1 April 2016 Sellafield Ltd became a subsidiary of the NDA. This change came as a result of an extensive review of the contract over a two-year period. Nuclear Management Partners (NMP) had previously run the site for the past seven year period.

#### Going concern

A full explanation of the adoption of a going concern basis appears in the Accounting Policies, note 2.1 to the Annual Accounts.

# Statement of Accounting Officer's Responsibilities

Under Section 26 of the Energy Act 2004, the Secretary of State (with approval of HM Treasury) has directed the NDA to prepare a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the NDA and of its income and expenditure, changes in taxpayer's equity and cash flows for the financial year.

In preparing the accounts the Accounting Officer is required to:

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

The Accounting Officer for the Department of Energy and Climate Change (DECC) has designated the Chief Executive as Accounting Officer for the NDA.

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 for the safeguarding the NDA's assets, are set out in the Accounting Officers' Memorandum published by HM Treasury.

### Governance Statement

#### Introduction

This statement is constructed in line with the guidance given in 'Managing Public Money', updated in July 2013. It summarises the structure of the NDA Board and the Executive and how these provide effective governance over the key activities undertaken during 2015/2016; the control and assurance frameworks in place to measure the effectiveness of delivery; and the findings of key audit and assurance reviews and associated improvement actions.

DECC as the NDA sponsor department utilises the services of UK Government Investments (UKGI), formerly Shareholder Executive (ShEx) until 1 April 2016, to provide oversight and governance of the NDA. The formal agreement between the NDA and DECC is set out in a Framework Document supported by a Memorandum of Understanding between DECC and UKGI.

#### NDA

The NDA operates in accordance with the provisions of the Energy Act 2004, the Framework Document and Cabinet Office guidelines for NDPBs. It seeks to apply, where appropriate, best practice in corporate governance as represented by the Government's Corporate Governance Code.

We are committed to ensuring that there is no modern slavery or human trafficking in our supply chains or in any part of our business. Our Code of Conduct and Supply Chain Charter reflect our commitment to acting ethically and with integrity in all our business relationships.

#### The Board

The Board sets the strategic framework and direction within which the NDA operates. It is responsible for ensuring that high standards of corporate governance are observed at all times within the NDA. In particular, it is responsible for agreeing the plans against which overall performance and delivery by the Executive is monitored and measured. It also ensures the maintenance of an appropriate control framework through which it obtains assurances that risk is properly assessed and managed and appropriate internal controls are in force and complied with.

At the start of 2015/2016, the Board comprised seven Non-Executive Directors including the Non-Executive Chairman, Stephen Henwood, and four Executive Directors: the Chief Executive Officer (CEO), Sellafield Programme Director, Strategy & Technology Director and CFO. The Chairman's appointment will conclude on 28 February 2017. The tenure of two Non-Executive Directors, Patrick Dixon and Janette Brown ended on 4 March 2016. Janet Ashdown and Rob Holden were appointed as Non-Executive Directors effective 1 June 2015. Tom Smith is the Senior Non-Executive Director and the nominated Non-Executive Director for the purposes of the Whistleblowing Policy.

The Board generally meets formally on a bi-monthly basis with the meeting agenda closely aligned to corporate activities and driven principally by the annual planning and performance management cycles and developments in the major programmes and projects across the estate. The Board met outside of this cycle to consider updated proposals for the MSSS Programme at Sellafield.

The NDA operates a Schedule of Delegated Authority (SoDA), approved by the Board, under which day-to-day business management of the NDA is delegated to the Chief Executive Officer who, in turn, discharges his responsibilities through the wider Executive Team. The Board is supported by Audit and Risk Assurance, Remuneration, and Safety and Security Committees which are comprised wholly of Non-Executive Board members and to which the Board has delegated specific responsibilities. The NDA Chairman has an open invitation to attend all three Committees and attends for items of particular interest.

The Board places particular emphasis on the quality and integrity of the data submitted for its use. To maintain these high standards, critical processes and outputs fall within the control of the NDA's Assurance framework and are thus subject to either peer review and/or independent review by Internal Audit.

#### The Chairman

The Chairman is accountable to the Secretary of State and, where appropriate to the Scottish Ministers, for the delivery of the NDA's obligations under the Energy Act (2004) and for the Authority's activities and performance in implementing its Strategy and Annual Business Plan. The UKGI, acting on behalf of the DECC Secretary of State, issues annual priorities to the Chairman for the NDA to deliver, and provides the formal governance interface between the NDA and Government.

The Chairman has particular responsibility for providing effective leadership and strategic direction to the Board. He is also responsible for ensuring the Board has the necessary balance of skills and experience to discharge its duties effectively, for setting the tone for high standards of regularity and propriety; for ensuring the NDA's affairs are conducted openly, transparently and with probity; for representing the NDA to the public and stakeholders; and for providing the Secretary of State with an annual statement on the effectiveness of the Non-Executive Board Members.

The Chairman has regular meetings with DECC Ministers, the Permanent Secretary and senior UKGI and DECC officials that augment the interface between NDA senior management and officials. During the year, the Chairman also presented on NDA activities and performance to the DECC Board. The Chairman makes himself available for meetings with Scottish Ministers and Scottish Government representatives given their role in the approval of NDA strategic and planning decisions as well as their interest in the performance of the Scottish sites and the impact of Scottish and Westminster policies on decisions affecting the sites.

#### The Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee supports the Board in its responsibilities for issues of risk, control and governance. It reviews the comprehensiveness of assurance mechanisms in place within the NDA, and the reliability and integrity of those assurances. Key activities during 2015/2016 included:

- working closely with the Finance and Assurance functions, Internal and External Audit to ensure the NDA meets all of its financial reporting obligations in a timely manner
- ensuring that the accounting practices deployed by the NDA are in line with DECC and HM
  Treasury guidance and oversight; and making sure that these translate into an easily
  understood and transparent Annual Report and Accounts
- supporting the work undertaken on bringing maturity to the NDA's changed approach to risk management that places increased emphasis on the strategic risks the organisation faces
- providing oversight of the information risk management control framework and associated improvement plans
- providing oversight and guidance on the further development of the organisation's Assurance Map. The Assurance Map is an aid to understanding the layers of assurance throughout the NDA (and the SLCs), and shows the assessment of effectiveness of key controls.
   Construction of the NDA's Assurance Map is in line with the guidance provided by HM Treasury and utilises the three lines of defence methodology.

The Committee typically meets five times a year. Membership during 2015/2016 was:

- Janette Brown (Chair stood down 4 March 2016)
- Patrick Dixon (stood down 4 March 2016)
- Tom Smith
- Volker Beckers (from 2 June 2015 and chair from 17 March 2016)
- Janet Ashdown (from 17 March 2016)

Regular attendees at Committee meetings include the NDA Chairman, Chief Executive Officer and Accounting Officer, Chief Financial Officer, Assurance Director, the Head of Group Internal Audit, and Head of Financial Operations, representatives from the Government Internal Audit Agency, and DECC's Audit Committee along with representation from UKGI and the National Audit Office (NAO).

#### The Remuneration Committee

The Remuneration Committee advises the Board on the remuneration and terms of service for the Chief Executive Officer and the Executive Team; monitors their performance in delivering the annual

objectives agreed by the Board; and assesses the NDA's arrangements for succession planning and talent management. More details on the work of the Committee are contained in the Remuneration and Staff report on page 64.

The Committee typically meets four times a year. Membership during 2015/2016 was:

- Evelyn Dickey (Chair)
- Ken McCallum
- Rob Holden (from 1 June 2015)

The NDA Chairman, Chief Executive Officer and Accounting Officer, and the HR Director are regular attendees at Committee meetings, except for discussion of issues relevant to their own remuneration.

#### Safety and Security Committee

The Safety and Security Committee supports the Board in discharging its responsibilities in respect of issues of health, safety (including both nuclear and occupational safety) and environment in the NDA estate and nuclear safeguards and security matters. Issues addressed by the Committee during 2015/2016 included reviewing the estate-wide safety risk management, reviewing safety performance with particular focus on assessment of specific incidents and the SLC response to these, and overall trend analysis. The Committee also provides oversight of security across the estate.

The Safety and Security Committee membership during 2015/2016 was:

- Patrick Dixon (Chair stood down 4 March 2016)
- Janet Ashdown (from 1 June 2015, Chair from 17 March 2016)
- Rob Holden (from 1 June 2015)

Regular attendees are the NDA Chairman, Chief Executive Officer and Accounting Officer, Assurance Director and Director NSSSE.

#### The Accounting Officer and Chief Executive Officer

The NDA Chief Executive Officer is responsible for the leadership and operational management of the NDA. The responsibilities of the Accounting Officer are set out in a letter from the DECC Permanent Secretary, the Accounting Officer Memorandum, and the Framework Document. The Accounting Officer is accountable to Parliament for the activities of the NDA, the stewardship of public funds entrusted to the NDA and the extent to which key performance targets and objectives are met. The Accounting Officer meets regularly with the DECC Permanent Secretary in his capacity as DECC Accounting Officer, and also has a schedule of regular meetings with UKGI, DECC and with Scottish Government representatives.

#### **Executive Team**

The Executive team has remained unchanged during the year. However, the Communications and Stakeholder Relations Director, Jon Phillips, left on the 31 March 2016 and the process to recruit a replacement is now complete. Activities requiring specific Executive attention throughout the year include the project to transfer Sellafield Ltd from being owned by a PBO to it becoming a subsidiary of the NDA; the oversight and management of the consolidation phase following the award of the Magnox contract to a new PBO; the management and oversight of the spending review submissions to Government for their consideration (along with the arrangements for dealing with the Spending Review settlements) and the management and oversight of the development of the third five-yearly published NDA Strategy document (2016).

The Executive Team is accountable for implementing the strategy and plans approved by the Board. It articulates the NDA's requirements to the PBOs and SLCs that manage and run the 17 sites under contract to the NDA and holds them to account for their performance against those requirements. The Executive Team lead on the five core processes essential to successful delivery of the NDA mission:

 Strategy - the framework for delivery of our mission that sets out our strategic direction and long-term objectives and allows us to make recommendations on a series of discrete issues

- Planning facilitates estate-wide decisions over the short and long-term, setting out the
  activities and outcomes that will deliver what we want, in the right timeframe and within the
  estate budget
- **Contracting** contractual arrangements for the management and operation of our SLCs which enable effective performance management resulting in the provision of appropriate reward to our contractors and their respective PBOs (and ultimate shareholders)
- Performance Management analyses SLC performance and programme / project plans, as well as proposals for managing deviations from plans, with rigorous verification of claims ensuring that there is robust challenge, dialogue and action where appropriate
- Assurance provides confidence to the NDA and our stakeholders that the NDA Strategy will
  be delivered, that we have the right people and plans in place and that hazards are reducing
  as planned.

In order to achieve the delivery of the five core processes the NDA is committed to further develop the organisation into an exemplar NDPB, developing high-performing professional people and teams that are fully engaged in the business, committed to continuous improvement and consistently delivering planned outcomes through a disciplined approach to the task in hand.

The Executive reviews estate-wide performance monthly, reporting to the Board and to Government on this and on its interventions to address deviations from the plan. Regular Business Reviews are held with each of the SLC Executive Teams with participation from the respective PBO. Performance against plan is a standing Board agenda item. Bi-annual reviews are held with each of the NDA subsidiary companies and include Springfields and Capenhurst. Monthly Governance Meetings are held with UKGI, and Quarterly Strategy, Policy and Governance Meetings (QSPGM) are held with broader Government representation (UKGI, Scottish Government, HM Treasury and DECC) to report on performance, including targets set by Government, and on strategic matters. The NDA is included within the scope of the DECC Investment Committee for consideration of high-risk, high expenditure proposals. The normal requirement is for these proposals to be also subject to scrutiny by the Treasury Approval Panel.

#### **Board and Sub-Committee Attendance Record**

Title and Number of Meetings	Board 9	Audit 5	RemCo 5	Safety & Security 4
Board Members				
S Henwood	9	(5)	(5) 2 as chair	(4)
P Dixon	7 out of 8	4 out of 4	1 out of 1	3 out of 3
J Brown	8 out of 8	4 out of 4		
K McCallum	9		3	
T Smith	8	4		(1)
V Beckers	7	3		(1)
E Dickey	8		5	(1)
J Ashdown	5 out of 8			4 with 1 as chair
R Holden	6 out of 8		3 out of 3	4
J Clarke	9	(5)	(5)	(4)
D Batters	9	(5)		(2)
P Lutwyche	9			(2)
A Simper	9			

<sup>()</sup> in attendance at meeting – not a member

#### Performance of the Board and its Committees

The NDA Chairman assesses the performance of each Non-Executive Board member annually and this is reported to UKGI. This covers generic issues about the quality of the contribution to the Board as well as the input on specific areas for which the member was appointed. For the Executive Members, objectives (both corporate and personal) are proposed by the CEO and approved by the

Remuneration Committee. The achievement of corporate objectives is assessed and assured by an independent internal audit review.

During the year, the Board recognised and considered the observations from the previous Board Effectiveness Review (conducted in the early part of 2015/16) while undertaking all aspects of its duties and responsibilities. A further review is planned for 2016/17.

#### Approach to risk

Risk management is a fundamental element of the NDA's approach to discharging its responsibilities. A revised risk management framework was approved by the Board in 2015/2016 which refreshed the NDA's risk management vision and risk appetite and defined roles and responsibilities for risk management activities throughout the organisation. The NDA has identified 14 corporate strategic risks relating to the delivery of its mission. These are formally reviewed annually by the Board and Executive and form the basis for detailed ongoing assessment by the NDA Board, Executive and leadership team. Of these 14 corporate risks, the following three risks are scheduled to be reviewed in further detail at the Audit and Risk Assurance Committee:

- the NDA has insufficient funding to fulfil its mission for the next 5 years.
- failure of control environment leads to fraud, bribery and corruption.
- ineffective NDA governance of subsidiaries leads to reputation damage.

Similarly, the Safety and Security Committee are scheduled to review in further detail the following three corporate risks:

- The NDA's assets do not perform as required, adversely impacting on the NDA mission.
- Security breach Malicious attack disrupts the NDA mission, damages reputation or causes radiological release.
- Disruption to operations due to failure of critical supporting ICT and Infrastructure.

While the Chief Executive Officer has overall responsibility for risk management, ownership of risks lies with the Board. The Portfolio Management Office facilitates the effective management of risk and, in conjunction with Internal Audit, leads the prioritisation of Assurance reviews into key controls. A robust executive led risk review process has been introduced to strengthen accountability and governance arrangements. Risk Management has been integrated into 'The way we work' with a focus on strategy development, planning and assurance processes.

The NDA's capacity to handle risk is influenced by its governance structure that supports the decommissioning and commercial operations undertaken under contract by site licensees. Throughout this contractual relationship, the NDA seeks assurance of high risk management standards across our estate. Risk management is an embedded feature of both the monthly reporting cycle and the review structure so that the Executive are able to take a holistic view by considering both the risk profile and the assurance measures around specific activities on the estate. Risk management is also a standard agenda item of the Business Reviews between the NDA Executive and the various SLC and PBO Executives. The Nuclear Industry Risk Management Association has been established to ensure good risk management practices are shared throughout the NDA estate.

#### **System of Internal Control**

The Accounting Officer has the responsibility for maintaining a sound System of Internal Control and reviewing its effectiveness in supporting the achievement of the NDA's policies, aims and objectives, while safeguarding the public funds and departmental assets for which he is personally responsible, in accordance with the responsibilities outlined in 'Managing Public Money'. The Accounting Officer is supported and informed by the NDA Internal Audit function, external auditors and other assurance functions both within the NDA and across the estate.

The System of Internal Control has been in place in the NDA for the period commencing 1 April 2015 up to the date of approval of the Annual Report and Accounts, in accordance with Treasury guidance. It is designed to manage risk to a reasonable level while ensuring compliance with mandated rules and regulations. As it is not feasible to eliminate all risk of failure in the achievement of policies, aims

and objectives, the system can therefore only provide reasonable and not absolute assurance of effectiveness. The NDA Executive Team has responsibility for the development and maintenance of the Internal Control Framework as it applies to their functional responsibilities. The Board and the Audit and Risk Assurance Committee provide oversight and challenge to the system of internal control and ensure plans to address weaknesses to the system are in place.

The NDA System of Internal Control is subject to continual review and assessment. In addition to the controls operated by the NDA, significant reliance is placed on the controls and assurances operated across the estate by the NDA subsidiaries and the SLCs. The NDA provides an Internal Audit service to its subsidiaries while each SLC makes provision for an Internal Audit service that supports its individual business model and risk profile.

The NDA has in place a Quality Assurance framework for the classification, specification, development and assurance of all business critical models. These procedures have been reviewed during the year to ensure they remain appropriate and are in line with the 2013 MacPherson Review recommendations, which apply to all Government departments and their arm's length bodies, including the NDA and its subsidiaries. The NDA strives to make continuous improvements to its existing processes in support of the MacPherson recommendations and, where potential improvements have been identified, these have been either implemented during the year or have been included in the respective plan for implementation in 2016/2017.

The NDA's Head of Group Internal Audit has determined that there is generally a sound framework of Governance, Risk Management and Control both within the NDA and the wider estate. He has also determined that there is generally a high level of compliance with the Government Code of Corporate Governance. This opinion is based on the work undertaken by Internal Audit including its oversight of the various assurance activities undertaken by the NDA and its subsidiaries along with its oversight and engagement with the SLC Internal Audit functions.

The Accounting Officer has fully concurred with the opinion of the Head of Group Internal Audit and has further judged that the framework is appropriate to meet the Authority's objectives.

#### Internal audit

The NDA Internal Audit function consists of a small in-house team that works closely with the NDA Executive in developing and delivering the Internal Audit work programme. The core team is augmented by an outsourced delivery team, currently provided by RSM. The Internal Audit mandate is to look across management systems as a whole and to develop and deliver a robust Internal Audit plan that reviews high-risk activities and assesses the effectiveness of the internal controls both within the NDA and across its estate. A regular update on Internal Audit activities and outcomes is provided to the NDA Executive via a dashboard report and to the Audit and Risk Assurance Committee via a detailed quarterly report.

The NDA Internal Audit maintains a contractual and strong working relationship with the SLC Internal Audit functions which gives it access to the SLC audit personnel, their Audit Committee members, full oversight of audit plans and resulting audit reports. The SLC operates a standard approach as set out by the NDA. These arrangements allow the NDA Internal Audit function to evaluate the impact of any audit findings on the overall estate-wide system of internal control which in turn assists the Accounting Officer in his overall assessment. The NDA Internal Audit provides an assessment of SLC Internal Audit performance within its regular reports to the NDA Executive and Audit & Risk Assurance Committee.

The internal work programme for 2015/2016 was strongly aligned to the NDA Assurance Map and covered a broad range of operational risks with a balance between activities concerning the NDA only and activities involving expenditure across its full estate. Internal Audit and the Assurance Directorate work closely to ensure that key risks are prioritised and are subject to an appropriate level and type of 'assurance' cover so that resource is used efficiently and effectively.

The NDA has a well-established process for dealing with allegations arising from whistle-blowing which uses the Internal Audit function for single point co-ordination. The NDA's policies and working

methods for dealing with and responding to whistle-blowing are subjected to continuous review to ensure a best practice approach is maintained. A specified Non-Executive Director has been appointed to provide oversight of both the process and the specific casefiles on behalf of the Board.

Internal Audit has utilised its unique role within the organisation to share, where possible and appropriate, best practice.

The majority of the reviews undertaken and finalised by the year end, covering both the NDA and its subsidiary organisations, showed that the process and controls could be categorised as either reasonable or good.

Across the NDA and its subsidiary organisations Internal Audit reported major weakness in two of the topics under review. The first was in respect of the general governance arrangements at an affiliated organisation which receives socio-economic funding from the NDA and the second concerned a reward process operated by one of the NDA subsidiary organisations. Improvement actions were implemented immediately.

Action plans were agreed for all reported weaknesses and these plans are either complete or are being progressed to an agreed schedule.

During the latter part of 2015/2016, as part of its quality assessment and improvement programme, the NDA initiated an independent review of the operation of its Internal Audit function and arranged a similar review for each of the SLC Internal Audit functions. These reviews will conclude during the early part of 2016.

In addition to the work undertaken by internal audit, the assurance function has undertaken a number of assurance reviews during the past year with the aim of driving improvements in the business. The most significant of these have been:

- a review into the evidence to support a fundamental change in the waste strategy for MSSS.
   The review supported the proposal which will allow earlier retrievals from the MSSS Silos with associated cost savings
- reviews into two major contracts at Sellafield which were intended to bolster internal capacity for design and delivery. The reviews found shortcomings in the incentivisation and contract management arrangements which have been addressed.

#### NDA information risk management

In accordance with the published Information Governance Strategy (IGS), the NDA continues to implement an associated National Programme (the IGP) to ensure that optimal business value is extracted from NDA-owned knowledge and information assets. The need remains for the NDA to continue to do this in a compliant and secure manner and these specific conditions remains at the forefront of its approach.

The IGP has the aim of improving information risk standards and practices across the NDA estate, combined with reducing baseline costs and increasing its ability to share, collaborate and communicate efficiently, effectively and securely. The IGP consolidates a number of discrete projects, work streams, Government mandated obligations and initiatives into a suite of coherent and coordinated cross-estate programmes intended to:

- underpin NDA's leadership, governance and, where appropriate, auditability and accountability – the NDA being an intelligent client on UK HMG's behalf
- improve the estate's Information Governance culture and associated practices, with a focus on maximising business value through availability and collaboration
- develop a unified estate-wide approach to information risk management reporting and the application of relevant standards and practices
- implement an estate-wide Information and Communication Technology strategy
- develop and implement an estate-wide Cyber Security strategy (see below)

- develop and implement an effective and co-ordinated estate-wide knowledge management improvement plan
- manage the estate's long-term Records and Information Management requirements (Nucleus
   The Nuclear and Caithness Archive)
- enforce an NDA Information Risk Appetite against which to measure the acceptability of information risk
- establish an effective management system that enables the NDA and its subsidiaries to confidently exploit the value of its information and knowledge assets where the opportunity arises and it is prudent to do so.

In accordance with the objectives of the IGS, the NDA is in the early stages of developing a Cyber Security and Resilience Programme (CSARP) to underpin the emerging Cyber Security strategy. This programme's principal objective is to present a single coherent package of projects and activities addressing the increasing cyber threat with a particular focus on those vulnerabilities that need to be prioritised in the civil nuclear estate.

An estate-wide forum of senior NDA, NDA subsidiary and SLC Directors responsible for key aspects of IGP delivery, chaired by the NDA Senior Information Risk Owner (SIRO), has been constituted to assist the IGP and CSARP Programme Managers with the implementation of programme initiatives. Good progress continues to be made in this area as evidenced by the outputs from audits and reviews, chief amongst them being the annual Cabinet Office-led IAMM assessment, to which all members of the NDA estate contribute.

Information Risk Management performance across the estate during the past year has continued to show steady improvement in line with previous years and the targets agreed with DECC and ONR (CNS) have all been met satisfactorily.

## **Remuneration and Staff Report**

#### 1. The Board and Directors

During 2015/2016 two Non-Executive Directors, Janet Ashdown and Rob Holden were appointed to the Board as detailed below. In the same period two Non-Executive Directors, Janette Brown and Patrick Dixon resigned from the Board on the 4 March 2016.

<b>Current Board Members</b>		Date Appointed	NED Current term
Stephen Henwood	Chairman	1 March 2008	1 March 2014 – 28 February 2017
John Clarke	Chief Executive Officer	1 June 2008	n/a
David Batters	Executive Director	18 October 2010	n/a
Pete Lutwyche	Executive Director	3 March 2014	n/a
Adrian Simper	Executive Director	1 March 2014	n/a
Tom Smith	Non-Executive Director	5 March 2013	1 March 2016 – 28 February 2019
Ken McCallum	Non-Executive Director	1 March 2014	1 March 2014 – 28 February 2017
Evelyn Dickey	Non-Executive Director	1 March 2015 (Chair, Remuneration Committee from 1 June 2015)	1 March 2015 – 28 February 2018
Volker Beckers	Non-Executive Director	1 March 2015 (Chair, Audit and Risk Assurance Committee from 17 March 2016)	1 March 2015 – 28 February 2018
Janet Ashdown	Non-Executive Director	1 June 2015 (Chair, Safety and Security Committee from 17 March 2016)	1 June 2015 – 31 May 2018
Rob Holden	Non-Executive Director	1 June 2015	1 June 2015 – 31 May 2018

Civil service appointments are made in accordance with the Civil Service Commissioners' Recruitment Code, which requires appointment to be on merit on the basis of fair and open competition, but also includes the circumstances when appointments may otherwise be made.

Non-Executive Directors are appointed by the Secretary of State for DECC in conjunction with Scottish Ministers following consultation with the NDA Chair and in line with Codes of Practice issued by the Commission of Public Appointments.

No Board member or Director had any other company directorships or material interests that would conflict with their management responsibilities for the 2015/2016 financial year.

#### The Role of Chairman

The Chairman is a Non-Executive Director role working for the NDA for 2 days a week. The Chairman is responsible for leading the Board and as such has no involvement in the day to day operation of the NDA.

Stephen Henwood, the current Chairman, was appointed for a third term on 1 March 2014 for a period of a further 3 years. Stephen's tenure as Chairman expires on 28 February 2017 and a recruitment process for a new Chair is currently in progress with an appointment planned for later this year to allow for a smooth handover.

#### **Notice Periods**

The notice period for the Chief Executive officer is 12 months. For the other Executive directors the notice period is 6 months.

#### **Duration of Non-Executive Director Terms**

All Non-Executive Directors are appointed for a three year term from the dates detailed in the table on the previous page.

#### 2. Remuneration Report

The Remuneration Committee consists of the following Non-Executive Directors.

Name	Date of Appointment	Meetings attended
Evelyn Dickey (Chair)	1 March 2015	5 out of 5
Rob Holden	1 June 2015	3 out of 3 (appointed mid-year)
Ken McCallum	1 March 2014	3 out of 5

Meetings are also attended by the Chairman, Chief Executive and HR Director for topics where there is no conflict of interest.

The objectives of the Remuneration Committee are detailed as follows:

- to determine the remuneration and terms of service of CEO and Executive Directors to ensure they are fairly rewarded for their individual contribution to the organisation, having proper regard to the organisation's circumstances and performance and the need to recruit, motivate and retain appropriate calibre executives
- to monitor the performance of the CEO and individual Executive Directors through the mechanism of annual objectives agreed between the Chairman and CEO and the CEO and each of the Executive Directors
- to advise on and oversee appropriate contractual arrangements for such staff including the proper calculation and scrutiny of termination payments taking account of such national guidance as is appropriate
- to advise on the Authority's employment policies and their revision, including matters of magnitude in relation to HR issues such as Talent Management and Executive Succession Planning

The major Remuneration Committee decisions in 2015/2016 were:

- the review of Performance at a NDA level and individual executive level to determine the annual bonus awards for the year 2014/2015
- the vesting of the Long-Term Incentive Plan (LTIP) awards granted in 2013 were agreed
- the awards for the LTIP plan to vest in 2019 were agreed
- the Committee has taken the opportunity to refresh and update its Executive Reward policy which sets out key principles and criteria on which reward decisions are made.

#### **Reward Principles:**

#### **Economic and market context:**

The NDA's model of procuring global private sector expertise to deliver decommissioning requires a highly professional executive skilled in commercial, financial and technical expertise. The attraction, motivation and retention of high calibre executives is a critical success factor and enabler to deliver the mission and ensure true value for money.

Executive rewards should rightly acknowledge the high level of experience and professional expertise required to address the demanding challenge of nuclear decommissioning in the UK, while also seeking to provide value to the taxpayer in an economic climate that necessitates restraint in all sectors.

The challenges for NDA leadership run from setting the future strategy for decommissioning to reviewing and implementing the optimal management model for Sellafield Ltd. They oversee the contracts to bring Dounreay or Magnox sites to interim end states, as well as manage and seek innovative ways of maintaining and extending the delivery of around £1 billion per annum of commercial income.

This requires a combination of commercial skills, specialised technical expertise and management experience. It is a highly sought after blend of qualities that inevitably commands a premium in a competitive global economy. The increasingly competitive market for such talent is exacerbated in the light of growing demands, not only in the international nuclear sector (be it new build or decommissioning), but also for major infrastructure projects in the UK and overseas.

The Committee routinely seeks independent advice on remuneration and, in reaching its conclusions, assesses both the public and private sectors to set a level of reward that ensures the NDA can confidently drive forward the improved performance needed across our estate. A key principle developed is that the NDA continues to pay around the median in comparison to other comparable public and private sector organisations.

The established remuneration policy, as described above, applied throughout the year and is expected to continue to apply going forwards, supporting the NDA's ability to attract, retain and motivate the people needed to deliver the organisation's mission.

#### **Directors Remuneration**

The remuneration of the Chief Executive and Executive Directors comprises base pay, an annual performance-related payment and a Long-Term Incentive Plan (LTIP), pension and other benefits.

#### Salaries

In setting salaries this year the Committee noted pay increases across the private sector and the demands on public spend. It also took into consideration that pay increases across the NDA and the wider public sector had been, for a fourth consecutive year, set at 1%. It concluded that the salaries of the Board Executive Directors would be increased by 1%. This was in line with the HMG Pay remit process and the pay increase also applied to all employees within the NDA.

The Committee recognises the need to retain talent within the NDA at all levels and will continually review salaries in line with market conditions and benchmarking reviews, increased scope of accountabilities and performance levels.

#### Performance-Related Pay

Executive awards are linked to the achievement of personal and corporate objectives, both aligned to the NDA's Corporate Plan. Objectives are approved at the beginning of the financial year by the Board.

77% of Corporate Targets for 2015/2016 were achieved, reflecting the performance outlined elsewhere in the annual report. This outcome was subject to internal audit review, endorsement by the Internal Audit Director of DECC and acceptance by the Audit and Risk Assurance Committee of the NDA. The Remuneration Committee reviewed this outcome in the context of the NDA's overall performance, the individual performance and contribution of each executive in order to award the individual annual performance payments.

#### Long-Term Incentive Plan (LTIP)

The LTIP represents an additional award equal to up to 50% of the annual performance-related payment earned during the previous year, with payment falling due three years post-grant date. The final value of any LTIP award can fall within a range between 0% and 200% depending upon performance against targets as determined by the Remuneration Committee. The LTIP operates with rolling annual awards with a new payment figure calculated at the start of each three-year period. The aim is to motivate Executives to improve performance and increase engagement in activities to deliver on longer term outcomes. Targets were approved

by the Committee and are now in place for LTIP plans for 2014-2017 and 2015-18, and concluded for 2013-2016. Progress against LTIP targets are reviewed regularly as part of the Remuneration Committee meetings.

#### Pensions

Pension benefits are provided through the Civil Service Pension Arrangements. A new pension scheme called Alpha was introduced on 1 April 2015 and the PCSPS was closed to new entrants. The PCSPS comprises four defined schemes: either a 'final salary' scheme (Classic, Premium or Classic Plus); or a 'whole career' scheme (Nuvos). These statutory arrangements are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under Classic, Premium, Classic Plus and Nuvos are currently increased annually in line with the Pensions Increase Legislation. See appendix 2 for further detail. Pension benefits for Executive Directors are provided through the Civil Service pension Arrangements.

#### Other Benefits

Benefits are listed in the Directors Emoluments table with appropriate footnotes. As in previous years, this included for the CEO, the provision of a taxable allowance of £48,000 per annum, equivalent to £2,200 per month after tax, to enable the CEO to rent an apartment in London. This allowance covers all living expenses. This is driven by the role requiring significant time in London to successfully lead the business and fully engage with Government and other stakeholders. All Directors receive £12,000 per annum as a Car Allowance.

#### Fees

The remuneration of the Chairman and Non-Executive Directors is determined by DECC. Non-Executive Directors are not involved in decisions relating to their own remuneration.

As part of his reappointment the Chairman's fee has remained static in 2015/2016. Non-Executive Directors are entitled to fees of £25,000 per annum. During 2015/2016 the Chair of the Audit and Risk Assurance, Remuneration and Safety and Security Committees received supplementary fees of £7,500 for the performance of those roles. Fees for the Chairs of the Audit and Risk Assurance and Safety and Security Committees, appointed from 10 March 2016, are still subject to agreement.

Non-Executive Directors and the Chairman do not receive performance-related bonuses or pension entitlements but are reimbursed for reasonable expenses incurred in the performance of their duties as Directors.

Details of Director's Emoluments, pension and cash equivalent transfer values may be seen in the notes to the financial statements, appendices at the end of this section.

## Ratio between median earnings of organisation's workforce and highest paid Director This information has been audited:

	2015/2016 TOTAL £'s	2014/2015 TOTAL £'s
Band of highest paid Director's total remuneration	485,000 - 490,000	470,000 - 475,000
Median total remuneration	69,455	65,959
Ratio	7.1:1	7.2:1
Band of lowest paid employee's total remuneration	15,000 - 20,000	15,000 - 20,000

This table shows the ratio of the highest earning Director against that of the employee at the median in earnings, as well as the range. The data includes base pay, allowances and performance related payments as well as severance payments. It does not include employer pension contributions and the cash equivalent transfer value of pensions. This follows a recommendation made in the Hutton report and continues to ensure that the NDA Remuneration Report takes account of best practice in its production.

#### 3. Staff Report

The NDA is committed to excellence in the delivery of all our people management practices and during the year this was recognised through the achievement of a Silver Investors in People (IiP) award.

liP is the standard for people management with a community of 14,000 organisations across 75 countries. The standard defines what it takes to lead, support and manage people well for sustainable results. The NDA's movement from accredited status to silver status is therefore recognition that the organisation is meeting the criteria to be a great employer, is an outperforming place to work, with a clear commitment to sustained success.

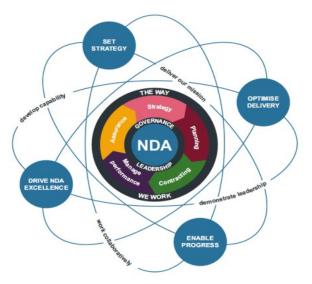


Fig 1 – The Way We Work

The award is also a reflection of the NDA's focus on clearly defining our mission, our core purposes and the values that guide everything we do. Our aim is to make sure that everyone at the NDA understands our wider goals and objectives and our core processes so they are clear about how, collectively, we will deliver this important mission.

One of the core purposes of the NDA is to 'Drive NDA Excellence' (see Fig 1) which is about developing the NDA into an exemplar Non-Departmental Public Body (NDPB) – developing high-performing, professional people and teams that are fully engaged in the business, committed to continuous improvement and consistently delivering planned outcomes through a disciplined approach to our core processes.

Our four core values guide our work and underpin everything that we do. They are not descriptions of the work we do or the strategies we employ to achieve our mission; instead, they describe what is important to us, what we hold dear and the basic elements of our approach to work:

#### Deliver our mission

We are resolutely focused on achieving our mission and passionate about delivering safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean-up and waste management.

#### Demonstrate leadership

We demonstrate leadership across the decommissioning industry by setting a clear direction for the clean-up of the UK's nuclear legacy and driving its effective and efficient implementation.

#### Work collaboratively

To be successful in our mission, we will work collaboratively with a range of organisations to improve performance, optimise use of resources, and foster innovation through knowledge sharing across our estate and the wider sector.

#### Develop capability

To successfully achieve our mission we are committed to developing the capability of the NDA, the organisations working across our estate, and the wider UK nuclear workforce.

In developing and improving our people management practices, we manage and monitor our staff in four key areas:

Headcount and Staff Costs Staff Turnover, Health and Wellbeing Development and Capability Recruitment and Diversity

#### i. Headcount and staff costs

#### **NDA** Group staff costs

This information has been audited.

NDA Group 2016	NDA Authority (a)		Subsidiarie		
	Permanently employed staff	Others	Permanently employed staff	Others	TOTAL
	£m	£m	£m	£m	£m
Wages and salaries	17	2	45	3	67
Social security costs	2	-	5	-	7
Pension costs	3	=	7	-	10
Total staff costs	22	2	57	3	84

This information has been audited.

NDA Group 2015	NDA Authority (a)		Subsidiarie		
	Permanently employed staff	Others	Permanently employed staff	Others	TOTAL
	£m	£m	£m	£m	£m
Wages and salaries	17	3	40	2	62
Social security costs	2	-	4		6
Pension costs	2	-	6		8
Total staff costs	21	3	50	2	76

- (a) Included within administration expenditure see note 5 to the accounts
- (b) Included within programme expenditure see note 6 to the accounts

See also section iii below on secondments. The above costs include the costs of the exit packages referred to in the 'Staff Turnover' section below.

The Group participates in various pension schemes; both defined contribution and defined benefit. Further details can be found in note 27 to the Accounts.

Pension costs include only those items included within operating costs. Items reported elsewhere have been excluded.

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

	Permanently employed staff	Others	Total 2016	Total 2015
NDA Group	No.	No.	No.	No.
Directly employed – Authority	207	36	243	215
Directly employed – Subsidiaries	873	19	892	823
Total	1,080	55	1,135	1,038

Of the total NDA permanent employees the breakdown by gender is as follows:

Authority 2016	Male	Female	Other	Total
CEO	1	-	-	1
Exec Directors excl. CEO	3	-	=	3
Other Directors (non-Board)	3	1	=	4
Other employees	116	83	-	199
Total	123	84	-	207

#### Tax arrangements of public sector appointees

We are required to provide information about off-payroll appointments of consultants, contractors or staff that last longer than 6 months. We only use these arrangements where we cannot avoid them, for example to bring in unique skills, capability and experience that we do not have in-house. We look to minimise the use of these arrangements and include contractual clauses in appointment documentation to enable us to receive assurance that the individual or their employer is managing their tax affairs appropriately. Our right to request assurance over tax obligations is made explicit to all off-payroll workers and during the year we exercised this right to seek tax assurance, with all impacted workers providing the assurance required.

Our off-payroll appointments at 31 March 2016 for those individuals on more than £220 per day and lasting more than six months are detailed below. This shows that there were four new off-payroll workers in the year whose assignments lasted more than 6 months:

Length of appointment at 31/3/16	Number of appointees
Less than 1 year	4
1-2 years	5
More than 2 years	nil

#### ii. Staff Turnover, Health and Wellbeing

#### **Staff Turnover**

Staff Turnover in the NDA is below average. The average length of service is 6.6 years and for the year 2015/2016 turnover of permanent staff was 6.1%. This compares to an average external turnover rate of 13.6% (as per latest 2014/2015 CIPD survey).

One individual leaving the NDA during the year was in receipt of a total exit package (including contractual notice) as set out below:

This information has been audited.

2016 Exit package cost band	Number of compulsory redundancies	Number of other agreed departures	Total number of exit packages by cost band
£100,000 - £149,999	0	1	1
Total number of exit packages	0	1	1

In 2014/2015 there was one such individual, who left the NDA with an exit package as set out below: This information has been audited.

2015	Number of compulsory	Number of other agreed	Total number of exit packages by cost
Exit package cost band	redundancies	departures	band
£100,000 - £149,999	0	1	1
Total number of exit packages	0	1	1

#### Health and Wellbeing

We recognise that health and wellbeing at work is vital. We closely monitor both short- term and long-term sickness absence and have policies and support mechanisms in place, including access to an

external employee assistance service (EAP), helping us effectively manage and support individuals back to work. For 2015/2016 an average of 5.3 days per year was lost to sickness absence. This equates to an absence rate of 2.4% and is less than the national average of 6.9 days sick leave a year.

#### iii. Development and capability

Ensuring we have the right people in role, with the right skills is vital to being able to deliver our mission. To facilitate this, during 2015/2016, we launched a new career framework, detailing the key skills and capabilities required at every level and within each of our 3 broad job families. We place a continued focus on effective performance management supported by line manager training, and the building of quality development plans going forward. This all happens in line with the standards defined within the career framework and will further support our ability to grow the capability of our people against our key requirements.

In building capability we aim to adopt a balanced approach to learning. We target 70% of all learning through on-the-job development, with 20% as relationship-based learning and the remaining 10% delivered through direct training or a classroom-based approach.

During the year £309,583 was spent on training and development, and there were five secondments outside of the NDA. 928 face to face training days were recorded.

#### iv. Recruitment and diversity

#### **Equality of opportunity and treatment**

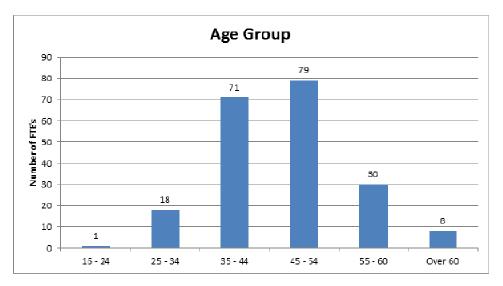
The NDA believes that every individual has a right to equal treatment and opportunities. Discrimination or harassment on the grounds of gender, age, marital status, ethnic or national origin, religion, sexual orientation or disability will not be tolerated.

The NDA's Equal Opportunities, Harassment, Discrimination and Diversity Policy outlines the rights of all employees as well as the responsibility on all staff to comply with equal opportunities legislation. Furthermore, ongoing monitoring of equal opportunities data is undertaken to ensure compliance with this policy.

In line with our people policies, the NDA makes every attempt to support all individuals who are disabled. This includes those seeking employment with the NDA, as well as those employees who have become recently disabled. This includes:

- full and fair consideration for applications for employment, where all screening and assessment
  is carried out in line with our recruitment standards and with reference to the candidate's
  aptitudes and abilities.
- reasonable adjustments and arranging appropriate training for employees of the company who
  are disabled, or have become recently disabled, in order to support their continuing
  employment, training, career development and promotion

The current age profile across the NDA is shown in the graph below:



#### Recruitment

During the year 20 permanent appointments (20 FTE's) were made. This is against a backdrop of a competitive marketplace where skilled technical and specialist skills are increasingly in demand requiring a continued focus to build our external talent pipeline in line with the future skill and capability needs of the NDA.

#### Collective bargaining

We recognise Prospect for the purposes of collective bargaining with the scope of the agreement being:

- the annual pay award
- holidays
- hours of work

The NDA recognises that the decision to join, or not to join, the Union is entirely a matter of individual choice. Our position is therefore neutral on the issue of union membership. All employees are able to become and remain members of the Union without prejudice to their employment or career prospects. For those individuals who choose to become trade union members we would encourage them to have an active participation in Union life.

#### Reward and Benefits - Notes to Financial Statements

#### **Appendix 1 – Directors' Emoluments**

This information has been audited.

Tillo lillottilation nao bo												
	2015/2016	2015/2016	2015/2016	2015/2016	2015/2016	2015/2016	2014/2015	2014/2015	2014/2015	2014/2015	2014/2015	2014/2015
	Salaries	Additional benefits	Performance Related	LTIP	Pension benefits	Total emoluments	Salaries	Additional benefits	Performance Related	LTIP	Pension benefits	Total emoluments
		benefits	Payment	payments made	(xv)	emoluments		benefits	Payment	payments made	benefits	emoluments
	£	£	£	£	£	£	£	£	£	£	£	£
Stephen Henwood	170,000	-				170,000	170,000	ı				170,000
Chris Fenton (i)	-	-				-	29,792	ı				29,792
Janette Brown (ii),(iii)	30,141	-				30,141	32,500	1				32,500
Patrick Dixon (iii),(iv)	30,141	-				30,141	32,500	-				32,500
Tom Smith	25,000	-				25,000	25,000	1				25,000
Ken McCallum (v)	-	-				-	-	1				-
Volker Beckers (vi),(vii)	25,000	-				25,000	2,083	1				2,083
Evelyn Dickey (vi),(viii)	31,250	-				31,250	2,083	-				2,083
Janet Ashdown (ix),(x)	20,833	-				20,833	-	1				-
Rob Holden (ix)	20,833	-				20,833	-	ı				-
John Clarke (xi)	273,030	60,000	109,212	47,727	103,615	593,584	270,327	60,000	108,671	34,010	100,426	573,434
David Batters (xii)	227,250	16,353	67,380	27,113	87,150	425,246	225,000	12,000	67,860	32,849	83,587	421,296
Pete Lutwyche (xiii)	227,250	12,000	78,629	-	87,150	405,029	225,000	12,000	69,660	-	83,588	390,248
Adrian Simper (xiv)	166,650	15,193	50,328	19,092	92,756	344,019	165,000	12,000	48,114	24,383	103,965	353,462
NI-4												

#### Notes

- (i) Resigned 28 February 2015
- (ii) Includes additional fees of £6,875 for the role of Chair of the Audit and Risk Assurance Committee (£7,500 in 2014/2015)
- (iii) Resigned 4 March 2016
- (iv) Includes additional fees of £6,875 for the role of Chair of the Safety and Security Committee (£7,500 in 2014/2015)
- (v) Ken McCallum does not receive any additional remuneration for his services to the Board
- (vi) Appointed 1 March 2015
- (vii) Additional fees for the role of Chair of the Audit and Risk Assurance Committee from 17 March 2016 are subject to agreement and have not been paid
- (viii) Includes additional fees of £6,250 for the role of Chair of the Remuneration Committee (£nil in 2014/2015)
- (ix) Appointed 1 June 2015
- (x) Additional fees for the role of Chair of the Safety and Security Committee from 17 March 2016 are subject to agreement and have not been paid
- (xi) Additional benefits were a London renting allowance of £48,000 and a car allowance of £12,000
- (xii) Additional benefits received were a car allowance of £12,000 and compensation for unused annual leave of £4,353
- (xiii) Additional benefits received was a car allowance of £12,000
- (xiv) Additional benefits received were a car allowance of £12,000 and compensation for unused annual leave of £3,193
- (xv) Pension benefits are calculated as 20 x the real increase in pension during the year, plus the real increase in any lump sum, less employee contributions made. This is as per HMG guidelines.

#### Appendix 2 - Pension Detail

Employee contributions are set at the rate shown in the table below:

	All PCSPS Schemes & Alpha
Annual Pensionable Earnings (full-time equivalent basis)	2016 contributions
Up to £15,000	3.00* / 4.60
£15,001-£21,000	4.60
£21,001-£47,000	5.45
£47,001-£150,000	7.35
Over £150,000	8.05

<sup>\*</sup>Members who are in classic or who moved into Alpha from classic.

Benefits in Classic accrue at the rate of 1/80<sup>th</sup> of final pensionable earnings for each year of service. In addition, a lump sum equivalent to three years initial pension is payable on retirement. For Premium, benefits accrue at the rate of 1/60<sup>th</sup> of final pensionable earnings for each year of service. Unlike Classic, there is no automatic lump sum. Classic Plus is essentially a hybrid with benefits for service before 1 October 2002 calculated broadly as per Classic and benefits for service from October 2002 worked out as in Premium.

In Nuvos a member builds up a pension based on his pensionable earnings during their period of scheme membership. At the end of the scheme year (31 March) the members' earned pension account is credited with 2.3% of their pensionable earnings in that scheme year and the accrued pension is uprated in line with the Pensions Increase Legislation. In all cases members may opt to give up (commute) pension for a lump sum up to the limits set up by the Finance Act 2004.

Alpha is a career average scheme and was introduced on 1 April 2015. Most existing members, and new entrants joining after that date, became eligible for Alpha. Some members who were close to their normal retirement age (NRA) were not eligible to join.

For those who moved into Alpha from PCSPS, their pension will be made up of two portions: a portion from membership in the PCSPS (Classic, Premium, Classic Plus or Nuvos), and a portion from membership in Alpha. Contribution rates for 2015/2016 are shown in the table above.

In Alpha a member builds up a pension based on his pensionable earnings during their period of scheme membership. At the end of the scheme year (31 March) the members' earned pension account is credited with 2.32% of their pensionable earnings in that scheme year and the accrued pension is uprated in line with the Pensions Increase Legislation. In all cases members may opt to give up (commute) pension for a lump sum up to the limits set up by the Finance Act 2004.

The accrued pension quoted is the pension the member is entitled to receive when they reach pension age, or immediately on ceasing to be an active member of the scheme if they are already at or over pension age. Pension age is 60 for members of Classic, Premium and Classic Plus, 65 for members of Nuvos, and the later of age 65 and the member's State Pension Age (SPA) for Alpha. Further details about the Civil Service pension arrangements can be found at the website <a href="https://www.civilservicepensionscheme.org.uk">www.civilservicepensionscheme.org.uk</a>

#### Appendix 3 - Executive Directors' Pensions

This information has been audited:

	Real Increase in Pension during the year 2015/2016 £000's	Accrued Pension at 31 March 2016 £000's	CETV at 31 March 2015 £000's	CETV at 31 March 2016 £000's	Real Increase in CETV Funded by Employer £000's
David Batters	5 - 7.5	25 - 30	233	315	36
John Clarke	5 - 7.5	40 - 45	510	644	57
Pete Lutwyche	5 - 7.5	10 - 15	69	138	43
Adrian Simper	5 - 7.5	60 - 65	815	952	50

#### Notes:

The actuarial factors used to calculate CETVs were changed in 2015/2016. The CETVs at 31/3/15 and 31/3/16 have both been calculated using the new factors, for consistency. The CETV at 31/3/15 therefore differs from the corresponding figure in last year's report which was calculated using the previous factors.

#### **Cash Equivalent Transfer Values**

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme.

The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The figures include the value of any pension benefits in another scheme or arrangement which the individual has transferred to the Civil Service Pension Arrangements and for which the Civil Superannuation Vote (CS Vote) has received a transfer payment commensurate with the additional pension liabilities being assumed. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

#### **Real Increase in CETV**

This reflects the increase in CETV effectively funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangements) and uses common market valuation factors for the start and end of the period.

# Parliamentary Accountability Disclosures

The notes and disclosures in this section are subject to audit.

#### Losses and special payments

The disclosures in this note are in accordance with 'Managing Public Money', and the purpose of this note is to report on losses and special payments of particular interest to Parliament.

Total losses during the year were £5,850 (2015: £134,775).

Type of loss	2016 Total £	2016 Number of cases	2015 Total £	2015 Number of cases
Cash losses	-	-	2,995	1
Stores losses	-	-	33,776	3
Losses of pay, allowances and				
superannuation	-	-	-	-
Fruitless payments	5,850	50	93,316	27
Constructive losses	-	-	-	-
Claims waived or abandoned	-	-	-	-
Book-keeping losses	=	=	4,688	2
Failure to make adequate charges	-	-	-	-
Exchange rate fluctuation losses	-	-	-	-
Special payments	-	-	-	<u>-</u>
Total	5,850		134,775	

A contract loss provision in respect of potentially onerous commercial contracts with foreign countries to reprocess fuel is included within other provisions (note 26 to accounts) and is not included in the losses disclosed above.

There were no special payments in either the current or prior periods.

#### **Contingent liabilities**

Under the transfer scheme of 1 April 2005, the NDA has assumed responsibility for all occurrences relating to the designated nuclear sites that took place up to that date.

At 31 March 2016 the NDA held inventories of reprocessed Uranic material. These materials are currently held at nil value, due to uncertainty over their future use, which may result in as-yet-unquantified liabilities for the NDA.

Whilst not the lead employer, the NDA is the lead organisation and has ultimate responsibility for certain nuclear industry pension schemes, including the Combined Nuclear Pension Plan, the Magnox section of the ESPS, and the GPS Pension Scheme. Provisions for known deficits are included within Nuclear Provisions (note 25). However, movements in financial markets may adversely impact the actuarial valuations of the schemes, resulting in an increase in scheme deficits and consequent increase in nuclear provision.

## Contingent liabilities not required to be disclosed under IAS 37 but included for parliamentary reporting and accountability purposes:

The NDA has non-quantifiable contingent liabilities arising from indemnities given as part of the contracts for the management of the Low Level Waste Repository, Sellafield and Dounreay. These indemnities are in respect of the uninsurable residual risk that courts in a country which is not party to the Paris and Brussels Conventions on third party liability in the field of nuclear energy may accept

jurisdiction to determine liability in the event of a nuclear incident. These are not treated as contingent liabilities within the meaning of IAS 37 since the possibility of a transfer of economic benefit in settlement is considered too remote.

#### **International Carrier Bond**

During 2014/2015 the NDA procured a US Bond on behalf of their subsidiary, INS Ltd, in order to meet US law in respect of vessels calling at US ports for commercial purposes. This Bond is required to ensure that all duties, taxes and fees owed to the federal government are paid. The Bond would therefore only be called on in the case of non-payment of any of the above, and the total cost would not be expected to exceed \$100,000.

#### Other contingent liabilities

The NDA is currently involved in an on-going legal case with EnergySolutions. It is not considered probable that this will result in an outflow of resources from the NDA.

John Clarke

Chief Executive and Accounting Officer

20 June 2016

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

I have audited the financial statements of the Nuclear Decommissioning Authority for the year ended 31 March 2016 under the Energy Act 2004. The financial statements comprise: the Consolidated Statement of Comprehensive Net Expenditure and the Group and Authority Statements of: 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 and Staff Report and the Parliamentary Accountability Disclosures within the Accountability Report that is described in those reports as having been audited.

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

As explained more fully in the Statement of the Authority's and Accounting Officer's Responsibilities, the Authority 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 and report on the financial statements in accordance with the Energy Act 2004. 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 Nuclear Decommissioning Authority's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Nuclear Decommissioning 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 report.

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 Nuclear Decommissioning Authority's affairs as at 31 March 2016 and of the group's and the parent's net expenditure for the year then ended; and
- the financial statements have been properly prepared in accordance with the Energy Act 2004 and Secretary of State directions issued thereunder.

#### **Emphasis of Matter - Nuclear Provision**

Without qualifying my opinion, I draw attention to the disclosures made in notes 3 and 25 to the financial statements concerning the uncertainties inherent in the nuclear decommissioning provision. As set out in these notes, given the very long timescales involved and the complexity of the plants and materials being handled, a considerable degree of uncertainty remains over the value of the liability for decommissioning nuclear sites designated by the Secretary of State. Significant changes to the liability could occur as a result of subsequent information and events which are different from then current assumptions adopted by the Authority.

Note 25 shows the increase in the liability in 2015-16 arising from the changes in the long term discount rate, underlining the uncertainty inherent in management's estimate associated with the long timescales involved and discount rate assumptions. A further impact of the change to a negative long term discount rate for provisions is that, as disclosed, the later years, for which there is greater uncertainty over the underlying future costs, constitute a larger proportion of the liability estimate thereby amplifying the overall level of uncertainty.

#### Opinion on other matters

In my opinion:

- the parts of Remuneration and Staff Report and the Parliamentary Accountability disclosures to be audited have been properly prepared in accordance with Secretary of State directions made under the Energy Act 2004; and
- the information given in Performance Report and Accountability 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 parts of the Remuneration and Staff Report and the Parliamentary Accountability disclosures 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

29 June 2016

## **Annual Accounts**

# **Consolidated Statement of Comprehensive Net Expenditure**

for the year ended 31 March 2016

		2016	2015
	Note	£m	£m
Expenditure			
Authority administration expenditure	5	38	41
Programme expenditure	6	724	1,185
Adjustments to provisions	7	92,219	7,600
Depreciation and impairment	8 _	74	82
		93,055	8,908
Income	9	(1,020)	(1,068)
Net expenditure	_	92,035	7,840
Interest receivable	4	(1)	(25)
Interest payable	4	3	2
Net expenditure after interest for the year	_	92,037	7,817
Other comprehensive (income) / expenditure:			
Loss on derecognition of property, plant and equipment	11	-	15
Net recognised (gain) / loss on defined benefit pension schemes	27	(9)	18
Total comprehensive net expenditure for the year		92,028	7,850

The related notes numbered 1 to 32 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

# Authority Statement of Comprehensive Net Expenditure for the year ended 31 March 2016

	Note	2016 £m	2015 £m
Farman dilama			
Expenditure Authority administration expenditure	5	38	41
Programme expenditure	6	718	1,190
Adjustments to provisions	7	92,219	7,599
Depreciation and impairment	8	53	62
		93,028	8,892
Income	9	(985)	(1,035)
Net expenditure		92,043	7,857
Interest receivable	4	(1)	(1)
Interest payable	4	-	-
Net expenditure after interest for the year		92,042	7,856
Other comprehensive (income) / expenditure:			
Loss on derecognition of property, plant and equipment	11	-	15
Actuarial (gain) / loss on defined benefit pension schemes	27	(7)	9
Total comprehensive net expenditure for the year		92,035	7,880

The related notes numbered 1 to 32 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

#### **Consolidated Statement of Financial Position**

as at 31 March 2016

30 at 01 mai 31. 2010	Note	2016 £m	2015 £m
Non-current assets	HOLE	2111	2111
Property, plant and equipment	11	865	855
Recoverable contract costs	14	2,799	1,636
Finance lease receivables	21	45	44
Trade and other receivables	22	40	41
Total non-current assets		3,749	2,576
Current assets			
Assets classified as held for sale	16	_	_
Inventories	17	78	60
Other investments	20	336	382
Finance lease receivables	21	1	1
Trade and other receivables	22	165	227
Cash and cash equivalents	23	154	168
Total current assets		734	838
Total outlone accord		701	
Total assets	_	4,483	3,414
Current liabilities			
Trade and other payables	24	(1,473)	(1,573)
Nuclear provisions	25	(2,880)	(2,939)
Other provisions	26	(208)	(161)
Total current liabilities		(4,561)	(4,673)
		( , , ,	
Total assets less current liabilities	_	(78)	(1,259)
Non-current liabilities			
Trade and other payables	24	(1,431)	(1,508)
Nuclear provisions	25	(157,792)	(66,935)
Other provisions	26	(1,255)	(1,196)
Defined benefit pension scheme deficits	27	(5)	(14)
Total non-current liabilities	_	(160,483)	(69,653)
Net liabilities		(160,561)	(70,912)
Taxpayers' equity			
Revaluation reserve		77	59
General reserve		(160,640)	(70,973)
Total taxpayers' equity		(160,563)	(70,914)
Non-controlling interests	28	2	`´´2
Total equity		(160,561)	(70,912)
Total equity		(100,001)	(10,312)

The financial statements on pages 81 to 129 were approved by the Board on 16 June 2016 and were signed on its behalf by:

Al Ole

John Clarke - Chief Executive and Accounting Officer

20 June 2016

The related notes numbered 1 to 32 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

#### **Authority Statement of Financial Position**

as at 31 March 2016

	Note	2016 £m	2015 £m
Non-current assets	Hote	2111	2111
Property, plant and equipment	11	530	517
Investments in subsidiaries	13	229	229
Recoverable contract costs	14	2,799	1,636
Finance lease receivables	21	45	44
Trade and other receivables	22	40	41
Total non-current assets		3,643	2,467
Current assets			
Assets classified as held for sale	16	-	-
Inventories	17	42	38
Finance lease receivables	21	1	1
Trade and other receivables	22	397	449
Cash and cash equivalents	23	62	127
Total current assets	_	502	615
Total assets	_	4,145	3,082
Current liabilities			
Trade and other payables	24	(1,423)	(1,523)
Nuclear provisions	25	(2,878)	(2,938)
Other provisions	26	(207)	(159)
Total current liabilities		(4,508)	(4,620)
Total assets less current liabilities	<u> </u>	(363)	(1,538)
Non-current liabilities			
Trade and other payables	24	(1,424)	(1,488)
Nuclear provisions	25	(157,715)	(66,870)
Other provisions	26	(1,228)	(1,170)
Defined benefit pension scheme deficit	27	(1)	(9)
Total non-current liabilities		(160,368)	(69,537)
Net liabilities	_	(160,731)	(71,075)
Taxpayers' equity			
Revaluation reserve		52	34
General reserve		(160,783)	(71,109)
Total taxpayers' equity	_	(160,731)	(71,075)

The financial statements on pages 81 to 129 were approved by the Board on 16 June 2016 and were signed on its behalf by:

J. O.C.

John Clarke - Chief Executive and Accounting Officer 20 June 2016

The related notes numbered 1 to 32 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

## Statement of Cash Flows for the year ended 31 March 2016

for the year ended 31 March 2016					
		NDA G	•	Autho	_
		2016	2015	2016	2015
	Note	£m	£m	£m	£m
Cash flows from operating activities	0.015	(00.00=)	(= 0.1=)	(00.040)	(= 0=0)
Net expenditure for the year	SoCNE	(92,037)	(7,817)	(92,042)	(7,856)
Adjustments for:		(4)	(0.5)	(4)	(4)
Interest receivable	4	(1)	(25)	(1)	(1)
Dividend income from subsidiary	9	-	-	(10)	-
Interest payable	4	3	2	-	-
Depreciation of property, plant and equipment	11	60	82	42	65
Impairment of property, plant and equipment	11	14	-	11	- (0)
Reversal of impairment to subsidiary investment	13	=	=	-	(3)
(Increase)/decrease in recoverable contract	14	(4.400)	011	(4.400)	044
costs	17	(1,163)	911	(1,163)	911
(Increase) / decrease in inventories	17 22	(18)	43	(4)	53
(Increase) / decrease in receivables		62	128	52	135
Increase / (decrease) in payables	24	(177)	(400)	(165)	(425)
Increase / (decrease) in nuclear provisions	25 26	90,798	4,930	90,785	4,951
Increase / (decrease) in other provisions	20	106	(109)	106	(109)
Net cash (outflow) from operating activities		(2,353)	(2,255)	(2,389)	(2,279)
Cash flows from investing activities					
Interest receivable	4	1	25	1	1
Dividend receivable from subsidiary	9		25	10	!
Interest payable	4	(3)	(2)	-	_
Proceeds on disposal of property, plant and	•	(3)	(2)		
equipment	11	7	1	2	_
(Increase)/decrease in PPE due to	11,	,		_	
reclassification	25	(13)	20	_	_
Purchases of property, plant and equipment	11	(59)	(45)	(49)	(31)
(Purchase) / disposal of investments	20	46	(44)	(10)	(01)
Net cash (outflow) from investing activities		(21)	(45)	(36)	(30)
not out (outnot) nom mroomig uttinios		(=:)	(10)	(00)	(00)
Cash flow from financing activities					
Grants from parent department	SoCTE	3,295	3,357	3,295	3,357
Surrender of receipts to Consolidated Fund	SoCTE	(935)	(1,060)	(935)	(1,060)
Net cash inflow from financing activities		2,360	2,297	2,360	2,297
Net increase / (decrease) in cash and cash					
equivalents		(14)	(3)	(65)	(12)
Cash and cash equivalents at beginning of					
period	23	168	171	127	139
periou		100	171	14/	138
Cash and cash equivalents at end of period		154	168	62	127
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#### Statement of Changes in Taxpayers' Equity

for the year ended 31 March 2016

	General	Revaluation	Total
NDA Group	£m	£m	£m
Balance at 31 March 2014	(65,416)	70	(65,346)
Prior year adjustment (b)	(4)	-	(4)
Restated balance at 31 March 2014	(65,420)	70	(65,350)
Gross grants from parent department	3,357	=	3,357
Surrender of receipts to Consolidated Fund (a)	(1,060)	=	(1,060)
Surplus arising on revaluation of PPE	-	5	5
Deficit on revaluation of asset held for sale	-	(16)	(16)
Net comprehensive expenditure	(7,850)	· · · -	(7,850)
Balance at 31 March 2015	(70,973)	59	(70,914)
Transfer between reserves	· 1	(1)	-
Surplus arising on revaluation of PPE	-	19	19
Gross grants from parent department	3,295	=	3,295
Surrender of receipts to Consolidated Fund (a)	(935)	=	(935)
Net comprehensive expenditure	(92,028)	-	(92,028)
Balance at 31 March 2016	(160,640)	77	(160,563)

Authority	General £m	Revaluation £m	Total £m
Authority Balance at 31 March 2014	(65,526)	50	(65,476)
	, , ,	30	, ,
Gross grants from parent department	3,357	-	3,357
Surrender of receipts to Consolidated Fund (a)	(1,060)	-	(1,060)
Deficit on revaluation of asset held for sale	-	(16)	(16)
Net comprehensive expenditure	(7,880)	-	(7,880)
Balance at 31 March 2015	(71,109)	34	(71,075)
Transfer between reserves	1	(1)	-
Surplus arising on revaluation of PPE	-	19	19
Gross grants from parent department	3,295	-	3,295
Surrender of receipts to Consolidated Fund (a)	(935)	-	(935)
Net comprehensive expenditure	(92,035)	-	(92,035)
Balance at 31 March 2016	(160,783)	52	(160,731)

The revaluation reserve is used to record the increases in the fair value of property, plant and equipment carried at valuation and decreases to the extent that such decrease relates to an increase on the same asset previously recognised in taxpayers' equity.

The general reserve is used to record the deficit or surplus arising from the Statement of Comprehensive Net Expenditure, and the deficit or surplus arising on the transfer of assets and liabilities to the NDA from other parts of the public sector.

The transfers between reserves relate to the realisation of surpluses on disposal of revalued assets.

- (a) Surrender of receipts to Consolidated Fund of £935 million (2015: £1,060 million) included £17 million payable as at 31 March 2016 (2015: £16 million at 31 March 2015). This amount was included within current trade and other payables in the Statement of Financial Position of Group and Authority at 31 March 2016
- (b) The £4 million debit prior year adjustment to the general reserve in 2015 is the net effect of the following adjustments: £6 million credit to PPE (see note 11), £1 million debit to receivables and £1 million debit to payables

#### Notes to the financial statements

for the year ended 31 March 2016

#### 1. General information

The NDA is an executive NDPB that was established on 22 July 2004 under the Energy Act 2004 and is currently sponsored by DECC. The NDA was created with the primary objective of overseeing and monitoring the decommissioning and clean-up of the UK's civil nuclear legacy. The Financial and Strategic Overview on pages 15 to 24 provides further information on the NDA's operations.

These financial statements are presented in pounds sterling and all values are rounded to the nearest million (£m) except when otherwise indicated.

#### 2. Statement of significant accounting policies

#### 2.1 Basis of preparation

These financial statements have been prepared under the accounts direction issued by the Secretary of State for the DECC in accordance with section 26 of the Energy Act 2004. The accounts direction requires compliance with the Government Financial Reporting Manual (FReM) and any other guidance issued by HM Treasury. The NDA has a specific direction in respect of the accounting for waste management assets on an historical cost basis. The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FReM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the NDA for the purpose of giving a true and fair view has been selected. The significant accounting policies adopted by the NDA are described below. They have been applied consistently in dealing with items that are considered material to the financial statements, unless otherwise stated.

These financial statements have been prepared on the historical cost basis, except for the revaluation of property, plant and equipment (other than waste management assets). Investments, financial assets and financial liabilities (including derivative financial instruments) are measured at fair value through profit or loss.

The consolidated statement of financial position at 31 March 2016 shows net liabilities of £161 billion (2015: £71 billion). This reflects the inclusion of liabilities falling due in future years which, to the extent that they are not to be met from the NDA's other sources of income, may only be met by future grants in aid from the NDA's sponsoring department, DECC. Under the normal conventions applying to parliamentary control over income and expenditure, such grants in aid may not be issued in advance of need. Grants in aid for 2015/2016, taking into account the amounts required to meet the NDA's liabilities falling due in this year, have already been included in the DECC's estimates, and these have been approved by Parliament. There is no reason to believe that future DECC sponsorship and future parliamentary approval will not be forthcoming. It has accordingly been considered appropriate to adopt a going concern basis for the preparation of these financial statements.

#### 2.2 Adoption of new and revised Standards

The following new and revised Standards have been adopted in the current year. Their adoption has not had any significant impact on the amounts reported in these financial statements but may impact the accounting of future transactions and arrangements:

IFRS 13 Fair Value Measurement

IFRS 3 Business Combinations (amendment)

IFRS 8 Operating Segments (amendment)

IAS 16 Property, Plant and Equipment (amendment)

IAS 19 Employee Benefits (amendment)

IAS 24 Related Party Disclosures (amendment)

IAS 38 Intangible Assets (amendment)

The following Standards have not been adopted in the period but will be adopted prospectively from 1 April 2016. The Authority does not expect that the adoption of these Standards will have a material impact on the financial statements of the NDA Group:

IFRS 5 Non-current Assets Held for Sale and Discontinued Operations (amendment)

IFRS 7 Financial Instruments: Disclosures (amendment)

IFRS 10 Consolidated Financial Statements (amendment)

IFRS 11 Joint Arrangements (amendment)

IFRS 12 Disclosure of Interests in Other Entities (amendment)

IAS 1 Presentation of Financial Statements (amendment)

IAS 16 Property, Plant and Equipment (amendment)

IAS 19 Employee Benefits (amendment)

IAS 27 Separate Financial Statements (amendment)

IAS 28 Investments in Associates and Joint Ventures (amendment)

IAS 38 Intangible Assets (amendment)

The following Standards have been issued but are not yet effective:

IFRS 9 Financial Instruments

IFRS 15 Revenue from Contracts with Customers

IFRS 16 Leases

#### 2.3 Basis of consolidation

The consolidated financial statements incorporate the financial statements of the NDA and entities controlled by the NDA (its subsidiary undertakings) made up to 31 March each year. Control is achieved where the NDA has the power to govern the financial and operating policies of an investee entity so as to obtain benefits from its activities.

All intra-group transactions, balances, income and expenses are eliminated on consolidation.

#### 2.4 Income recognition

Income, including rental income, is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provided in the normal course of business, net of discounts, VAT and other sales related taxes, and electricity purchases relating to short-term balancing of output volume and hedging activities. Income received in advance of work performed is held on the statement of financial position (under trade and other payables as payments received on account) and released to the statement of comprehensive net expenditure when the work is completed and the liability extinguished. Income from contracts is recognised in accordance with the NDA's accounting policy on contracts (see below).

#### 2.5 Contracts

Where the outcome of a contract can be estimated reliably, income and costs are recognised by reference to the stage of completion of the contract activity at the reporting date. This is normally measured by the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs, except where this would not be representative of the stage of completion. Variations in contract work, claims and incentive payments are included to the extent that they have been agreed with the customer.

Where the outcome of a contract cannot be estimated reliably, contract income is recognised to the extent of contract costs incurred where it is probable they will be recoverable. Contract costs are recognised as expenses in the period in which they are incurred.

When it is probable that total contract costs will exceed total contract income, the expected loss is recognised as an expense immediately.

For contracts in progress at the reporting date, where costs incurred plus recognised profits less recognised losses exceed amounts invoiced to date the balance is shown under non-current assets as recoverable contract costs. Where amounts invoiced to date exceed costs incurred plus recognised profits less recognised losses the balance is shown under trade and other payables as payments received on account.

#### 2.6 Leasing

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

#### 2.6 (a) The NDA Group as lessor

Amounts due from lessees under finance leases are recognised as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term. The aggregate costs of any incentive to enter into an operating lease are also spread on a straight-line basis over the lease term.

#### 2.6 (b) The NDA Group as lessee

Assets held under finance leases are recognised as assets of the Group at their fair value or, if lower, at the present value of the minimum lease payments, each determined at the inception of the lease. The corresponding liability to the lessor is included in the statement of financial position as a finance lease obligation. Lease payments are apportioned between interest charges and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Interest charges are charged directly to the statement of net expenditure.

Rentals payable under operating leases are charged to the statement of net expenditure on a straight-line basis over the term of the relevant lease. Benefits received and receivable as an incentive to enter into an operating lease are also spread on a straight-line basis over the lease term.

#### 2.7 Foreign currencies

The individual financial statements of each Group entity are presented in the currency of the primary economic environment in which it operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group entity are expressed in pounds sterling, which is the functional currency of the NDA, and the presentation currency for the consolidated financial statements.

In preparing the financial statements of the individual reporting entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recorded at the rates of exchange prevailing on the dates of the transactions or at the contracted rate if the transaction is covered by a forward foreign exchange contract. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing on the reporting date. Nonmonetary items carried at fair value that are denominated in foreign currencies are translated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated. Exchange differences are recognised in the statement of net expenditure in the period in which they arise.

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated at exchange rates prevailing on the reporting date. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the date of transactions are used. Exchange differences arising, if any, are classified as equity and recognised in the Group's general reserve. Such translation differences are recognised as income or as expenses in the period in which the operation is disposed of.

The turnover, assets and liabilities of the foreign operations included within these consolidated financial statements are minor in the context of the Group as a whole and therefore the potential impact of any foreign currency movements are deemed to be negligible.

#### 2.8 Retirement benefit costs

The Group participates in various pension schemes, both defined contribution and defined benefit schemes.

For defined contribution schemes the amount charged to operating costs is the contributions payable in the year. Contributions made to multi-employer pension schemes where there is insufficient information to identify the Group's obligations are dealt with as payments to defined contribution schemes.

For defined benefit schemes, the liability recognised in the statement of financial position is the present value of the defined benefit obligation at the reporting date less the fair value of scheme assets, together with any adjustments for unrecognised past service costs, and less any amounts recoverable from third parties. 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 interest rates of high quality corporate bonds that have terms to maturity approximating to the terms of the related pension liability. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited in other comprehensive income in the period in which they arise. Past service costs are recognised immediately in operating costs to the extent that the benefits are already vested, and otherwise are amortised on a straight-line basis over the average period until the benefits become vested. The interest cost and the expected return on assets are shown as a net amount of interest costs.

Pension scheme assets are recognised to the extent that they are recoverable and pension scheme liabilities are recognised to the extent that they reflect a constructive or legal obligation.

Further information on the PCSPS can be found within the Remuneration and Staff Report on pages 64 to 75.

#### 2.9 Research and development expenditure

Expenditure on research activities not specifically recoverable directly from customers is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development expenditure is recognised only if all of the following conditions are met:

- an asset is created that can be identified
- it is probable that the asset created will generate future economic benefits
- the development cost of the asset can be measured reliably

Internally-generated intangible assets are amortised on a straight-line basis over their useful lives. Where no internally-generated intangible asset can be recognised, development expenditure is recognised as an expense in the period in which it is incurred.

#### 2.10 Taxation

Deferred tax assets are currently not recognised as the NDA does not anticipate a taxable surplus arising in the foreseeable future. Deferred tax liabilities are currently not recognised as they are offset by deferred tax assets.

VAT is accounted for in that amounts are shown net of VAT except:

- (i) Irrecoverable VAT is charged to profit or loss, and included under the heading relevant to the type of expenditure
- (ii) Irrecoverable VAT on the purchase of an asset is included in the capitalised purchase cost of the asset

The net amount due to, or from, HM Revenue & Customs in respect of VAT is included within payables or receivables respectively within the statement of financial position.

#### 2.11 Property, plant and equipment

Property, plant and equipment includes assets purchased directly by the Group and assets for which the legal title transferred to the Group under Transfer Scheme arrangements pursuant to the Energy Act 2004.

With effect from 1 April 2014 assets on designated nuclear sites are only recognised where two criteria are met. Firstly the economic element of the asset's value at the reporting date must exceed £100,000, and secondly the proportion of the asset relating to commercial activity should exceed 10%.

Assets on non-designated sites are recognised where their value exceeds £2,000.

The effect of this change of policy on the 2014/15 accounts is described below. From 2015/16 existing assets on designated sites that no longer meet the above recognition criteria are impaired with a charge to the SoCNE (see note 8) and then eliminated.

None of the assets derecognised during 2014/15 had been revalued in the past. The effect of the introduction of this policy in the year and the estimated theoretical effect on the previous financial year are shown in the table below:

	2016	2015	2014
NDA Group and Authority	£m	£m	£m
SoCNE: Other Comprehensive Expenditure – increase	=	15	33
SoCNE: Depreciation – (decrease)	-	-	(19)
SoCNE: Programme expenditure - increase	-	-	1
SOFP: Property, Plant & Equipment – (decrease)	=	(15)	(15)

On the grounds of immateriality, the 2013/14 adjustment in the table above was not treated as a prior period adjustment, with the correction being made instead in 2014/15 (See note 11g).

By applying clearer definitions of commercial materiality, and higher materiality thresholds, a large volume of low value items have been removed from the accounts while retaining materially similar overall gross and net book values in the Statement of Financial Position.

Similarly, by applying clearer definitions and more relevant materiality thresholds to future capital expenditure, the creation of new assets will be restricted to those which are a genuine and meaningful addition to the NDA's commercial asset base.

In line with the accounts direction issued by the Secretary of State for DECC, waste management assets are excluded from the FReM requirement to carry PPE at fair value due to lack of reliable and cost effective revaluation methodology. Such waste management assets are therefore carried at cost less accumulated depreciation and any impairment charges, providing the new threshold criteria above are met.

For property, plant and equipment carried at valuation, revaluations are currently performed on an annual basis to ensure that the carrying amount does not differ materially from that which would be determined using fair values at the reporting date. This includes assets used to support commercial activities, property located outside nuclear licensed site boundaries, and property located inside nuclear licensed site boundaries where a reliable and cost effective revaluation methodology exists. The categories of property, plant and equipment subject to revaluation are Land and Buildings.

Any accumulated depreciation at the date of revaluation is eliminated and the resulting net amount restated to equal the revalued amount. Any revaluation increase arising is credited to the revaluation reserve, except to the extent that it reverses a revaluation decrease for the same asset previously recognised as an expense, in which case the increase is credited to profit or loss to the extent of the decrease previously charged. A decrease in carrying amount arising on revaluation is charged as an expense to the extent that it exceeds the balance, if any, held in the revaluation reserve relating to a previous revaluation of that asset. On the subsequent de-recognition of a revalued asset, the attributable revaluation surplus remaining in the revaluation reserve is transferred directly to the general reserve.

Where economic facilities have been commissioned, the estimated cost of decommissioning the facilities is recognised, to the extent that it is recognised as a provision under IAS 37 'Provisions, Contingent Liabilities and Contingent Assets', as part of the carrying value of the asset and depreciated over the useful life of the asset. All other decommissioning costs are expensed as incurred. A change in estimated decommissioning costs is added to or deducted from the carrying value of the related asset. To the extent that such a treatment would result in a negative asset, the effect of the change is charged as an expense. The change in depreciation charge is recognised prospectively.

Depreciation is charged so as to write off the cost or valuation of assets, other than assets under construction, to their residual values over their useful lives, using the straight-line method, on the following bases:

LandNot depreciatedBuildings10 to 60 yearsIT equipment3 yearsFixtures and fittings3 to 10 yearsPlant and equipment10 to 30 yearsTransport equipment4 to 14 years

The exception to the above is in the depreciation of certain shipping assets which is calculated on a usage, rather than straight-line, basis.

Assets under construction are not depreciated until brought in to use.

Residual values and useful lives are reviewed, and adjusted if appropriate, at each reporting date.

#### 2.12 Investments in subsidiaries

Investments in subsidiaries are stated at cost less, where appropriate, provision for impairment.

#### 2.13 Impairment of non-financial assets

At each reporting date, the Group reviews the carrying amounts of its non-financial assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease. Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

#### 2.14 Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs of completion and all costs to be incurred in marketing, selling and distribution.

Reprocessed uranium inventory is held at nil value, pending development of long term options and cost estimates for disposition of this material.

#### 2.15 Assets classified as held for sale

Assets classified as held for sale are measured at the lower of carrying amount and fair value less costs to sell.

Assets are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable, the asset is available for immediate sale in its present condition and the asset is actively marketed for sale. Management must be committed to the sale which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

#### 2.16 Financial instruments

Financial assets and financial liabilities are recognised in the statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

#### 2.16 (a) Financial Assets

All financial assets are recognised and derecognised on a trade date where the purchase or sale of a financial asset is under a contract whose terms require delivery of the investment within the timeframe established by the market concerned, and are initially measured at fair value plus transaction costs, except for those assets classified as at fair value through profit or loss, which are initially measured at fair value (transaction costs are expensed in operating costs).

Financial assets are classified into the following specified categories: financial assets 'at fair value through profit or loss' (FVTPL), held to maturity investments, available for sale financial assets or loans and receivables. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. The Group has not classified any financial assets as held to maturity investments or available for sale.

#### Financial assets at FVTPL

Financial assets are classified as at FVTPL where the financial asset is either held for trading (for example other investments) or it is designated as at FVTPL. A financial asset is classified as held for trading if it has been acquired principally for the purpose of selling in the near future or it is a derivative that is not designated and effective as a hedging instrument. A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise or it forms part of a contract containing one or more embedded derivatives, and IAS 39 'Financial Instruments: Recognition and Measurement' permits the entire combined contract (asset or liability) to be designated as FVTPL. Financial assets at FVTPL are stated at fair value with any resultant gain or loss being recognised in profit or loss. Short term energy trading forward contracts are not revalued where the carrying amount is a reasonable approximation of fair value. The net gain or loss recognised in the statement of net expenditure incorporates any dividend or interest earned on the financial asset.

#### Loans and receivables

Finance lease receivables, trade and other receivables, and cash and cash equivalents, that have fixed or determinable payments that are not quoted in an active market, are classified as loans and receivables. Loans and receivables are measured at amortised cost using the effective interest rate method, less any impairment. Interest income is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial.

The effective interest rate method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset or, where appropriate, a shorter period, to the net carrying value of the financial asset.

#### Impairment of financial assets

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at each reporting date. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the asset have been impacted.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against

the allowance account. Changes in the carrying amount of the allowance account are recognised in the statement of net expenditure.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through the statement of net expenditure to the extent that the carrying amount of the financial asset at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

#### Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

#### De-recognition of financial assets

Financial assets are derecognised only when the rights to receive cash flows from the assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

#### 2.16 (b) Financial Liabilities

Financial liabilities are classified as either financial liabilities 'at fair value through profit or loss' (FVTPL) or other financial liabilities.

#### Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL where the financial liability is either held for trading or it is designated as at FVTPL. A financial liability is classified as held for trading if it has been incurred principally for the purpose of disposal in the near future or it is a derivative that is not designated and effective as a hedging instrument. A financial liability other than a financial liability held for trading may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise or it forms part of a contract containing one or more embedded derivatives, and IAS 39 'Financial Instruments: Recognition and Measurement' permits the entire combined contract (asset or liability) to be designated as at FVTPL. Financial liabilities at FVTPL are stated at fair value with any resultant gain or loss being recognised in profit or loss. Short term energy trading forward contracts are not revalued where the carrying amount is a reasonable approximation of fair value. The net gain or loss recognised in the statement of net expenditure incorporates any interest paid on the financial liability.

#### Other financial liabilities

Other financial liabilities, including trade and other payables, are initially measured at fair value, net of transaction costs. Other financial liabilities are subsequently measured at amortised cost using the effective interest rate method, with interest expense recognised on an effective yield basis.

The effective interest rate method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability or, where appropriate, a shorter period, to the net carrying value of the financial liability.

#### De-recognition of financial liabilities

Financial liabilities are derecognised when, and only when, the Group's obligations are discharged, cancelled or they expire.

#### 2.16 (c) Derivative Financial Instruments

The NDA enters into derivative financial instruments to manage its exposure to commodity price risk and foreign exchange rate risk, including commodity contracts and forward foreign exchange contracts.

Derivatives are initially recognised at fair value on the date on which the derivative contract is entered into and are subsequently re-measured to their fair value at each reporting date. The resulting gain or loss is recognised in the statement of net expenditure immediately.

A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realised or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

#### Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at fair value through profit or loss.

#### 2.17 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, and it is probable that the Group will be required to settle that obligation. Provisions are the Authority's best estimate of the expenditure required to settle the obligation at the reporting date, and are discounted to present value where the effect is material.

#### **Nuclear Provisions**

The financial statements include provisions for the NDA's obligations in respect of nuclear liabilities, being the costs associated with the nuclear decommissioning of designated sites. These are the licensed nuclear sites designated to the NDA by the Secretary of State under powers provided by the Energy Act 2004 and operated under contract to the NDA by the SLCs. These provisions are based on the latest assessments of the processes and methods likely to be used in the future, and represent best estimates of the amount required to discharge the relevant obligations. The NDA's obligations are reviewed on a continual basis and provisions are updated accordingly. Where some or all of the expenditure required to settle a provision is expected to be recovered from a third party, in accordance with IAS 37 'Provisions, Contingent Liabilities and Contingent Assets', the recoverable amount is treated as a non-current or current asset. Provision charges in the Statement of Comprehensive Net Expenditure are shown net of changes in the amount recoverable from customers. Provision changes are accounted for in the year in which they arise.

The Nuclear Provision and recoverable balances are expressed at current price levels and discounted using the rates determined by HM Treasury. The rates applicable in the 2015/2016 accounts are:

- Short-term rate: between 0 and up to and including 5 years, -1.55% per annum.
- Medium-term rate: after 5 and up to and including 10 years, -1.00% per annum
- Long-term rate: exceeding 10 years, -0.80% per annum.

In the 2014/2015 accounts, the equivalent rates were:

- Short-term rate: between 0 and up to and including 5 years, -1.50% per annum.
- Medium-term rate: after 5 and up to and including 10 years, -1.05% per annum
- Long-term rate: exceeding 10 years, +2.20% per annum.

Provision movement expenditure in the statement of comprehensive net expenditure includes the adjustments necessary to amortise one year's discount and restate the liabilities to current price levels. The movement also includes the adjustments arising from the change in discount rates from the previous basis to the new basis described above.

#### 2.18 Grants from parent department

In accordance with the FReM the NDA prepares its financial statements showing grants received from DECC as credited to the general reserve, and as financing in the statement of cash flows. Grants are received gross from DECC and receipts are surrendered separately.

#### 3. Critical accounting judgements and key sources of estimation uncertainty

In the application of the NDA's accounting policies, which are described in note 2, the Authority is required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is

revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

#### Critical Judgements in Applying the NDA's Accounting Policies

The following are the critical judgements, apart from those involving estimations (which are dealt with separately below), that management has made in the process of applying the NDA's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

#### Income recognition

The Group uses the percentage of completion method in accounting for its contracts. Use of the percentage of completion method requires the Group to estimate the work performed to date as a proportion of the total work to be performed.

#### **Key Sources of Estimation Uncertainty**

The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below.

#### Impairment of property, plant and equipment

Impairment is measured by comparing the carrying value of the asset or cash-generating unit with its recoverable amount. The NDA has therefore reviewed the asset base and all assets are reviewed for evidence of impairment. Given the ageing asset base this calculation has a degree of uncertainty within it. The carrying amount of property, plant and equipment at the reporting date was £865 million.

#### **Nuclear Provisions**

The nuclear provision represents the best estimate of the costs of delivering the NDA objective of decommissioning the plant and equipment on each of the designated nuclear licensed sites and returning the sites to pre-agreed end states in accordance with the published strategy. This programme of work will take until 2137. The estimates are necessarily based on assumptions of the processes and methods likely to be used to discharge the obligations, reflecting a combination of the latest technical knowledge available, the requirements of the existing regulatory regime, Government policy and commercial agreements. Given the very long timescale involved, and the complexity of the plants and material being handled, considerable uncertainty remains in the cost estimate particularly in the later years.

In preparing the estimate of the cost of decommissioning the designated sites, the NDA has focussed in particular on the first 20 years, which represents £51 billion out of the total £161 billion provision (2015: £46 billion out of £70 billion). In undiscounted terms it represents £47 billion out of a total of £117 billion (2015: £50 billion out of £118 billion).

As part of the preparation of the financial statements, the principal assumptions and sensitivities for the cost estimates have again been updated and reviewed by the NDA executive and, where appropriate, updates to the estimates have been made to reflect changed circumstances and more recent knowledge.

In preparing the best estimate of the provision required to settle the NDA obligations, it is recognised that there remains a significant degree of inherent uncertainty in the future cost estimates. Should outcomes differ from assumptions in any of the following areas, this may require a material adjustment to the carrying amount of the Nuclear Provision and related assets and liabilities:

- potential changes in the NDA funding profile, requiring the tailoring of expenditure across the
  estate to ensure the right balance between addressing high risk, hazard and affordability; for
  example emanating from either economic conditions or changes in funding resulting from the
  next Government Spending Review.
- the length of time over which the necessary programme of work will be delivered stretching out to 2137:
- interdependencies between programmes of work both within SLCs and across SLC boundaries. For example, a shortage of flasks for transport of spent fuel from the Magnox

- power stations to Sellafield could delay defueling and increase costs at Magnox, and also impact the production schedule and direct operations costs at Sellafield.
- a lack of detailed information on the design of the Legacy Ponds and Silos at Sellafield and the exact quantities and chemical composition of the historical wastes held in them, resulting in potential significant uncertainty in both the process and costs of dealing with these materials;
- uncertainty over future Government policy positions and potential regulatory changes;
- possible technological advances which may occur which could impact the work to be undertaken to decommission and clean up the sites.

Government has indicated that the preferred policy for management of plutonium is for reuse. Any final decision is conditional on business case approval for reuse of the material. Following review of the likely costs of the preferred policy, and the credible alternative of storage and disposal in the long-term, a prudent estimate of £7.5 billion (discounted) has been included within the Provision.

#### 4. Operating segments

For management purposes, the NDA is currently organised into various operating units, which are grouped by a combination of revenue generation, SLC activity, NDA Headquarters and NDA owned operating subsidiaries. The segmental analysis in the following table presents the net expenditure for each of the continuing operations.

#### Nuclear Decommissioning Authority Annual Report and Accounts 2015/2016

NDA Group 2016	Sellafield, reprocessing & transport	Magnox, electricity generation & Research sites	Dounreay site restoration	Waste management	Springfields and Capenhurst	NDA Admin and other non-prog	Subsidiaries and Group adjustments	Total 2016
	£m	£m	£m	£m	£m	£m	£m	£m
Authority administration expenditure	-	_	-	-	-	38	-	38
Authority administration expenditure	-	-	-	-	-	38	-	38
Contractor costs less capitalised	1,998	623	192	93	76	(17)	(93)	2,872
Decommissioning costs charged to nuclear provision Decommissioning costs charged to other provisions	(1,625) (168)	(723)	(173)	(45)	(71) (2)	-	-	(2,637) (170)
Fee, R&D and other programme expenditure	330	50	-	-	-	180	99	659
Programme expenditure Other expenditure (a)	535 53	(50)	19	48	3	163	6 21	724 74
Programme expenditure and other non-cash items	588	(50)	19	48	3	163	27	798
Nuclear Provision increase/(decrease)	64,041	15,537	492	10,496	1,052	-	-	91,618
Other provisions increase/(decrease)	600	-	-	- 10.100		1	-	601
Provisions increase/(decrease)	64,641	15,537	492	10,496	1,052	1	-	92,219
Income	(787)	(125)	(2)	(4)	-	(67)	(35)	(1,020)
Interest payable	-	-	-	-	-	-	3	3
Interest receivable	-	-	-	-	-	(1)	-	(1)
Net expenditure/(income) from continuing operations for the year	64,442	15,362	509	10,540	1,055	134	(5)	92,037

<sup>(</sup>a) Other expenditure is depreciation and impairment.

# Nuclear Decommissioning Authority Annual Report and Accounts 2015/2016

NDA Group 2015	Sellafield, reprocessing & transport	Magnox, electricity generation & Research sites	Dounreay site restoration	Waste management	Springfields and Capenhurst	NDA Admin and other non-prog	Subsidiaries and Group adjustments	Total 2015
	£m	£m	£m	£m	£m	£m	£m	£m
Authority administration expenditure	-	-	-	-	-	41	-	41
Authority administration expenditure	-	-	-	-	-	41	-	41
Contractor costs less capitalised Decommissioning costs charged to nuclear provision Decommissioning costs charged to other provisions Fee, R&D and other programme expenditure	1,950 (1,136) (241) 358	720 (719) - 53	179 (173)	88 (45)	69 (63) (2)	- - - 152	(94) - - 89	2,912 (2,136) (243) 652
Programme expenditure Other expenditure (b) Programme expenditure and other non-cash items	931 65 996	53 54 - 54	6 - 6	43 - 43	4 - 4	152 (3) 149	(5) 20 15	1,185 82 1,267
Nuclear Provision increase/(decrease) Other provisions increase/(decrease) Provisions increase/(decrease)	6,377 574 6,951	333 - 333	41 - 41	170 - 170	104 - 104	- - -	- 1 1	7,025 575 7,600
Income	(911)	(111)	(2)	(2)	-	(9)	(33)	(1,068)
Interest payable	-	-	-	-	-	-	2	2
Interest receivable	-	-	-	-	-	(1)	(24)	(25)
Net expenditure/(income) from continuing operations for the year	7,036	276	45	211	108	180	(39)	7,817

<sup>(</sup>b) Other expenditure includes depreciation and impairment.

#### Geographical information

The NDA Group's income is attributed to countries on the basis of the customer's location, as follows:

	2016 £m	2015 £m
United Kingdom Germany Japan Other countries	821 28 120 51	758 120 112 78
Total income	1,020	1,068

The Group's non-current assets are primarily located or based in the United Kingdom

#### 5. Authority administration expenditure

	2016	2015
Authority	£m	£m
Staff costs (see Remuneration and Staff Report)	24	24
Administration costs	12	15
Rentals under operating leases – other	2	2
Auditors' remuneration	-	=
	38	41

Directors' emoluments are included in the above figures and can be seen in the Remuneration and Staff Report on pages 64 to 75.

Auditors' remuneration represents fees payable to the NAO for the audit of the Authority and the NDA Group and amounted to £370,000 (2015: £395,000). No other remuneration has been paid to the NAO.

#### 6. Programme expenditure

	NDA (	Group	Authority			
NDA Group & Authority	2016 £m	2015 £m	2016 £m	2015 £m		
Contractor costs	2,921	2,941	3,014	3,034		
Less: Decom costs charged to NP (note 25)	(2,637)	(2,136)	(2,637)	(2,136)		
Less: Costs charged to OP (see note 26)	(170)	(243)	(170)	(243)		
Less: Contractor costs capitalised	(49)	(29)	(49)	(29)		
Contractor costs relating to commercial activity	65	533	158	626		
Amortisation of rec contract costs (see note 14)	243	306	243	306		
Revalorisation of advance payments (see note 24)	87	51	87	51		
M&O contractor fees	106	88	106	88		
Subsidiary operating costs (a)	81	70	-	-		
Trading costs	50	53	50	53		
Subsidiary staff costs	60	52	-	-		
Rentals under operating leases – other	9	11	-	-		
Research and development costs	9	9	6	6		
Insurance	7	5	15	13		
Dividend payable to minority interest	-	1	-	-		
Skills & socio-economic development programme	2	2	2	2		
Other costs	5	4	51	45		
Fee, R&D & other programme expenditure	659	652	560	564		
Programme Expenditure	724	1,185	718	1,190		

<sup>(</sup>a) Subsidiary operating costs includes auditors' remuneration payable for the audit of the NDA subsidiary companies amounting to £141,594 (2015: £138,700).

#### 7. Adjustments to provisions

	NDA G	iroup	Authority		
	2016	2015	2016	2015	
NDA Group & Authority	£m	£m	£m	£m	
Movement in nuclear provisions:					
Provided for in the year (see note 25)	90,209	5,853	90,209	5,855	
Unwinding of discount (see note 25)	1,409	1,172	1,409	1,171	
	91,618	7,025	91,618	7,026	
Movement in other provisions:					
Provided for in the year (see note 26)	599	562	599	561	
Unwinding of discount (see note 26)	2	13	2	14	
	601	575	601	575	
Total provisions movement	92,219	7,600	92,219	7,601	

#### 8. Depreciation and impairment

	NDA G	roup	Authority		
	2016	2016 <sup>.</sup> 2015		2015	
NDA Group & Authority	£m	£m	£m	£m	
Depreciation of PPE (see note 11)	60	82	42	65	
Impairment of PPE (see notes 11,13)	14	-	11	(3)	
	74	82	53	62	

#### 9. Income

NDA Group & Authority	NDA 2016 £m	Group 2015 £m	Autho 2016 £m	ority 2015 £m
Reprocessing & Transport, waste management and				
storage (a), (b)	831	938	792	905
Energy trading (c)	123	105	123	105
Sundry	9	14	4	16
Rental income	3	5	1	3
Admin / non-programme	54	6	55	6
Dividend from subsidiary	-	-	10	-
	1,020	1,068	985	1,035

<sup>(</sup>a) Revenue from spent fuel reprocessing, waste and product storage and the transportation of spent fuel, waste and products.

<sup>(</sup>b) The policy regarding the treatment of transactions between reportable segments is as given in note 31.

<sup>(</sup>c) Revenues from transactions with EdF amounted to more than 10 per cent of total revenues in the year, being £123 million (2015: £103 million) for electricity generation activities and £570 million (2015: £577 million) for reprocessing and the management of spent fuel and waste included in (a).

#### 10. Tax

The explanation for the nil tax charge for the period is set out below.

NDA Group	2016 £m	2015 £m
Net expenditure before tax	92,037	7,817
Deficit on ordinary activities before tax at the UK standard rate of corporation tax of 20% (2015: 21%)	18,407	1,642
Effects of: Income and expenditure which is not taxable or tax deductible Capital allowances for the year in excess of depreciation Unutilised losses	(18,231) 103	(1,588) 94
Current tax charge for the year Deferred tax release Total tax charge/(credit)	(279) - - -	(148) - - -

The NDA does not pay tax on any profits arising from its activities in relation to decommissioning, and similarly losses are not deductible in relation to decommissioning. Subsidiaries do not pay tax on profits arising as these are offset against the taxable losses of the NDA. A deferred tax asset has not been recognised in respect of any non-decommissioning losses incurred by the NDA as the NDA does not anticipate taxable surpluses arising in the foreseeable future.

#### 11. Property, plant and equipment

NDA Croup 2016	Land	Buildings	IT Equipment	Fixtures & Fittings	Plant & Equipment	Transport Equipment	Assets under Construction	Total
NDA Group 2016 Cost or valuation	£m	£m	£m	£m	£m	£m	£m	£m
At 1 April 2015	54	2,118		7	4 0 4 0	54	167	7,248
Revaluations	17	2,110	-	/	4,848	34	2	7,246 19
	17						59	59
Additions	-	-	-	<u>-</u> (0)	(100)	-		
Eliminations (f)	-	-	-	(2)	(136)	-	- (44)	(138)
Other reclassifications (i)	- (4)	1	-	-	44	9	(41)	13
Disposals	(4)	-	=	-	-	(6)	- (2)	(10)
Impairment (c)		-	-	=	(8)	-	(8)	(16)
At 31 March 2016	67	2,119	-	5	4,748	57	179	7,175
Depreciation								
At 1 April 2015	-	(2,062)	-	(6)	(4,301)	(24)	-	(6,393)
Charged in year	-	(4)	=	-	(52)	(4)	=	(60)
Eliminations (f)	-	-	-	2	136	-	-	138
Disposals	-	_	-	-	-	3	-	3
Impairment (c)	-	-	-	-	2	-	-	2
At 31 March 2016	•	(2,066)	-	(4)	(4,215)	(25)	-	(6,310)
Net book value at 31 March 2015	54	56	-	1	547	30	167	855
Net book value at 31 March 2016	67	53	-	1	533	32	179	865

The net book value of plant & equipment at 31 March 2016 (£533 million) includes £228 million relating to future decommissioning costs.

NDA Overve 0045	Land	Buildings	IT Equipment	Fixtures & Fittings	Plant & Equipment	Transport Equipment	Assets under Construction	Total
NDA Group 2015	£m	£m	£m	£m	£m	£m	£m	£m
Cost or valuation	40	0.404	-	0.4	F 4 47	50	000	7.000
At 1 April 2014	19	2,401	7	21	5,147	52	236	7,883
Prior year adjustment		(5)		-			(1)	(6)
Restated 1 April 2014	19	2,396	7	21	5,147	52	235	7,877
Additions	-	<del>-</del>	-	<del>-</del>	<del>-</del>	<del>-</del>	45	45
Eliminations (f)	-	(299)	(4)	(13)	(337)	(1)	-	(654)
Derecognition (g)	=	(8)	(3)	(1)	(21)	1	(4)	(36)
Reclassification from AHFS (h)	35	-	-	-	-	-	-	35
Other reclassifications (i)	-	24	-	-	59	6	(109)	(20)
Disposals	-	-	-	-	-	(4)	-	(4)
Revaluations		5	-	-	-	-	-	5
At 31 March 2015	54	2,118	-	7	4,848	54	167	7,248
Depreciation								
At 1 April 2014	_	(2,356)	(7)	(20)	(4,582)	(24)	=	(6,989)
Charged in year	_	(10)	-	-	(68)	(4)	=	(82)
Eliminations (f)	_	299	4	13	337	ì	=	654
Derecogntion (g)	_	5	3	1	12	_	=	21
Disposals	-	-	-	-	-	3	-	3
At 31 March 2015	-	(2,062)	-	(6)	(4,301)	(24)	-	(6,393)
Net book value at 31 March 2014	19	45	-	1	565	28	236	894
Net book value at 31 March 2015	54	56	-	1	547	30	167	855

The net book value of plant & equipment at 31 March 2015 (£547 million) includes £229 million relating to future decommissioning costs.

Authority 2016	Land £m	Buildings £m	IT Equipment £m	Fixtures & Fittings £m	Plant & Equipment £m	Transport Equipment £m	Assets under Construction £m	Total £m
Cost or valuation								
At 1 April 2015	46	2,068	-	5	4,452	1	160	6,732
Revaluations	19	-	-	-	-	-	-	19
Additions	-	-	-	-	-	-	49	49
Eliminations (f)	-	-	-	(2)	(136)	-	-	(138)
Other reclassifications	-	-	-	-	26	3	(29)	-
Disposals	(2)	-	-	-	-	-	-	(2)
Impairment (c)		-	-	-	(5)	-	(8)	(13)
At 31 March 2016	63	2,068	-	3	4,337	4	172	6,647
Depreciation								
At 1 April 2015	_	(2,058)	_	(5)	(4,151)	(1)	-	(6,215)
Charged in year	=	(3)	-	-	(39)	-	-	(42)
Eliminations (f)	=	-	-	2	Ì36	-	-	138
Impairment (c)	-	_	-	-	2	-	-	2
At 31 March 2016		(2,061)	•	(3)	(4,052)	(1)	-	(6,117)
Net book value at 31 March 2015	46	10	-		301	-	160	517
Net book value at 31 March 2016	63	7	-	-	285	3	172	530

The net book value of plant & equipment at 31 March 2016 (£285 million) includes £150 million relating to future decommissioning costs.

	Land	Buildings	IT Equipment	Fixtures & Fittings	Plant & Equipment	Transport Equipment	Assets under Construction	Total
Authority 2015	£m	£m	£m	£m	£m	£m	£m	£m
Cost or valuation								
At 1 April 2014	11	2,373	6	19	4,772	2	168	7,351
Additions	-	-	-	-	-	-	31	31
Eliminations (f)	-	(299)	(4)	(13)	(337)	(1)	-	(654)
Derecognition (g)	-	(8)	(2)	(1)	(19)	-	(1)	(31)
Reclassification from AHFS (h)	35	-	-	-	-	-	-	35
Other reclassifications	-	2	-	-	36	-	(38)	=
At 31 March 2015	46	2,068	-	5	4,452	1	160	6,732
Depreciation								
At 1 April 2014	-	(2,351)	(6)	(18)	(4,443)	(2)	-	(6,820)
Charged in year	_	(9)	-	-	`´(56)	-	-	(65)
Eliminations (f)	-	299	4	13	337	1	-	654
Derecognition (g)	_	3	2	-	11	-	-	16
At 31 March 2015	-	(2,058)	-	(5)	(4,151)	(1)	-	(6,215)
Net book value at 31 March 2014	11	22		1	329		168	531
Net book value at 31 March 2015	46	10	-	-	301	-	160	517

The net book value of plant & equipment at 31 March 2015 (£301 million) includes £164 million relating to future decommissioning costs.

(a) The NDA accounts for non-waste management assets on nuclear licensed sites, which have an ongoing value in use or realisable value, in accordance with IAS 16 and the requirements of FReM. Assets outside the nuclear licensed site boundaries are revalued in accordance with FReM.

The NDA continues to require SLCs to maintain inventories of all property, plant and equipment held on nuclear licensed sites and which are subject to validation and audit as part of the contractual terms in place between the NDA and license holders.

- (b) Land and buildings located outside the nuclear licensed site boundaries, were revalued at 31 March 2016 on the basis of existing use value or market value, as appropriate, by external qualified valuers. The valuations were undertaken in accordance with the Royal Institution of Chartered Surveyors Valuation Standards (6<sup>th</sup> Edition) by GVA Grimley Ltd Chartered Surveyors.
- (c) The impairment charge to expenditure of £14m (2015: £nil) relates to commercial assets at Sellafield and INS Ltd.
- (d) The Group's obligations under finance leases are secured by the lessor's title to the leased assets. Assets held under finance leases and capitalised in transport equipment have a carrying amount of  $\mathfrak E$  nil (2015:  $\mathfrak E$ nil).
- (e) Contracted capital commitments relating to those economic assets expected to be subsequently capitalised, were £22 million (2015: £29 million).
- (f) During the year NDA eliminated fully depreciated assets no longer performing commercial activity, which had a gross book value and accumulated depreciation of £138 million (2015: £654m).
- (g) In 2015, the NDA derecognised assets on designated sites which had a net book value below £100,000, in accordance with the policy set out in note 2.11. These assets had a gross book value of £36 million and accumulated depreciation of £21 million, giving rise to a loss on derecognition charged to Other Comprehensive Expenditure of £15 million. This was not treated as a prior period restatement on the grounds of immateriality.
- (h) In 2015 the land at Moorside was reclassified from Assets Held for Sale to Property, Plant & Equipment as per note 16.
- (i) Changes in the estimated future cost of decommissioning, related to commercial property, plant and equipment, are offset by matching changes in the value of the IAS 37 property, plant and equipment asset. An increase of £13 million was recognised in the year (2015: £20 million decrease), see note 25.

#### 12. Intangible assets

Intangible assets had no economic value at 31 March 2016 and 31 March 2015.

### 13. Investments in subsidiaries

Authority	2016 £m	2015 £m
Cost		
At 1 April	229	229
Additions	<del>_</del>	
At 31 March	229	229
Impairment		
At 1 April	-	(3)
Reversal	<del>_</del>	3
At 31 March	<u> </u>	
Net book value at 1 April	229	226
Net book value at 31 March	229	229

The reversal of impairment charge in 2014/15 of £3m relates to NDA Properties Limited and is credited to the Authority Statement of Comprehensive Net Expenditure under Depreciation and Impairment.

Details of the Authority's subsidiaries at 31 March 2016 are as follows:

Name	Country of incorporation	Nature of business	Proportion of ordinary shares held by NDA
Direct Rail Services Limited	UK	Rail transport services within the UK	100%
International Nuclear Services France SAS (i)	France	Transportation of spent fuel	100%
International Nuclear Services Japan KK (i)	Japan	Transportation of spent fuel	100%
International Nuclear Services Limited (INS Ltd)	UK	Contract management and the transportation of spent fuel, reprocessing products and waste	100%
NDA Properties Limited	UK	Property management	100%
Pacific Nuclear Transport Limited (i), (ii)	UK	The transportation of spent fuel, reprocessing products and waste	68.75%
Rutherford Indemnity Limited	Guernsey	Nuclear insurance	100%
Radioactive Waste Management Limited (iii)	UK	Development of Geographical Disposal Facility	100%
NDA Archives Limited (iv)	UK	Development of Nucleus - The Nuclear and Caithness Archive	100%

<sup>(</sup>i) Ownership through INS Ltd.

The liquidation of the subsidiary INS Rokkasho KK, in which NDA had a 66% shareholding, was completed on 21 August 2015.

The results of all of the above subsidiaries are included within these consolidated financial statements.

<sup>(</sup>ii) On 23 July 2014 the percentage owned by INS Ltd increased from 62.5% to 68.75%

<sup>(</sup>iii) Incorporated 3 March 2014

<sup>(</sup>iv) Incorporated 1 July 2014

NDA is a member of Energus, a company limited by guarantee registered in the UK, providing training facilities in support of the nuclear estate. NDA's liability is limited to £10.

NDA is a member of North Highland Regeneration Fund Limited, a company limited by guarantee registered in Scotland and contributing to socio-economic development in the North Highland region. NDA's liability is limited to £10.

NDA is a member of Energy Coast West Cumbria Limited, a company limited by guarantee registered in the UK and contributing to the economic regeneration of west Cumbria. NDA's liability is limited to  $\mathfrak{L}1$ .

### 14. Recoverable contract costs

The NDA and the Authority have commercial agreements in place under which some or all of the expenditure required to settle Nuclear Provisions will be recovered from third parties.

Recoverable contract costs comprise costs which were incurred before the revenue recognition period of each contract and which are amortised each year in line with revenue ('Historic costs' below) and costs which form part of the nuclear provision, which are restated each year for unwinding of discount and other changes in estimate, and released as they occur in each year ('Future costs' below).

NDA Group and Authority	2016 £m	2015 £m
Recoverable contract costs relating to Nuclear Provisions:		
Gross recoverable contract costs	7,222	5,661
Less applicable payments received on account (see note 24)	(3,577)	(3,504)
Less associated contract loss provisions (see note 26)	(846)	(521)
	2,799	1,636

The movements in the gross recoverable contract costs during the year are detailed in the table below.

NDA Group and Authority	Historic costs £m	Future costs £m	2016 Total costs £m	Historic costs £m	Future costs £m	2015 Total costs £m
Balance as at 1 April	2,457	3,204	5,661	2,763	3,143	5,906
Increase in year (see note 25)	-	2,072	2,072	=	505	505
Unwind of discount (see note 25)	-	35	35	=	30	30
Amortisation (see note 6)	(243)	-	(243)	(306)	-	(306)
Release in year (see note 25)	· -	(303)	(303)	· -	(474)	(474)
Balance as at 31 March	2,214	5,008	7,222	2,457	3,204	5,661

### 15. Deferred taxation

# Deferred tax liability not recognised

A deferred tax liability of £nil (2015: £7m) has not been recognised in respect of assets classified as held for sale as it has been offset by a deferred tax asset arising from accelerated capital allowances. The remaining unrecognised deferred tax asset arising from accelerated capital allowances is disclosed below.

# Deferred tax assets not recognised

The following deferred tax assets have not been recognised as the NDA does not anticipate a taxable surplus arising in the foreseeable future:

	2016	2015
NDA Group	£m	£m
Tax losses	871	640
Accelerated capital allowances	485	466
Intangibles	7	7
Short term timing differences	7	8
Deferred tax asset at UK standard rate of Corporation Tax for 2016 of		
20% (2015: 20%).	1,370	1,121

The UK standard rate of Corporation Tax decreased from 21% to 20% on 1 April 2015. The NDA does not anticipate a taxable surplus arising in the foreseeable future and therefore no adjustments have been made to its deferred tax asset as at 31 March 2016 as a result of the future changes in the standard rate of Corporation Tax.

### 16. Assets classified as held for sale and discontinued operations

### Assets classified as held for sale

On 1 May 2014 the NDA reached an agreement with NuGen on the key commercial terms of an agreement in respect of the land at Moorside, Sellafield. This was a revision to the previous terms under which this land has been included as an asset held for sale since 29 October 2009, and provides for NuGen to exercise an option to acquire the land before 2019. Given the potentially long timeframe before completion of the transaction it has been determined that the asset does not fully meet the criteria to be shown as an asset held for sale under IFRS5. However the NDA's expectation that a sale will be concluded is unchanged from previous years.

NDA Group and Authority	2016 £m	2015 £m
At 1 April	-	51
Revaluation	-	(16)
Reclassification to PPE (see note 11)	<del>-</del>	(35)
At 31 March	-	-

### 17. Inventories

	NDA G	NDA Group		ority
	2016 £m	2015 £m	2016 £m	2015 £m
Nuclear fuels	-	1	-	1
Raw materials and consumables	51	44	42	37
Work-in-progress	27	15	-	-
	78	60	42	38

# 18. Financial instruments by category

The accounting classification of each category of financial instruments, and their carrying values, is set out in the following table:

table in the following table.		NDA Group		Authority	
	Note	2016 £m	2015 £m	2016 £m	2015 £m
Financial assets Fair value through profit or loss (FVTPL):					
Other investments Loans and receivables:	20	336	382	-	-
Non-current finance lease receivable	21	45	44	45	44
Non-current other receivables	22	9	10	9	10
Current trade and other receivables (a)	22	86	146	323	373
Current finance lease receivables	21	1	1	1	1
Cash and cash equivalents	23	154	168	62	127
	•	631	751	440	555

	Note	NDA Gr 2016 £m	oup 2015 £m	Autho 2016 £m	ority 2015 £m
Financial liabilities Fair value through profit or loss (FVTPL):					
Current trade and other payables (b)	24	(753)	(715)	(718)	(671)
		(753)	(715)	(718)	(671)

- a) Prepayments and VAT are excluded as this analysis is required only for financial instruments
- b) Payments received on account, deferred income, grants and, where applicable, other taxes and social security, are excluded as this analysis is required only for financial instruments

Generally, financial assets and financial liabilities are generated by day-to-day operational activities and are not held to manage the risks facing the NDA in undertaking its activities. Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised, in respect of each class of financial asset and financial liability are disclosed in note 2.16.

The fair value of financial instruments represents the amount at which the instruments could be exchanged in a current transaction between willing parties, other than in a forced sale or liquidation. Where market values are not available, fair values are calculated by discounting cash flows at prevailing rates. The Authority considers that the carrying amount of loans and receivables and other financial liabilities approximates their fair value.

The Group has a small number of Euro-denominated contracts which are not significant to the Financial Statements of the Group. This small currency risk is nonetheless still mitigated through the use of forward currency contracts placed with the Government Banking Service. The currency risk arising from overseas operations within the group is negligible.

The Group is not exposed to any significant level of interest rate risk due to the absence of any commercial borrowings in its Consolidated Statement of Financial Position.

The Group is exposed to a low level of price risk in respect of its energy trading operations. This risk is mitigated by the trading strategy employed which stipulates how far ahead of time energy products are purchased and sold, and is reviewed regularly by the Energy Output Trading Committee. Due to the pricing structure and historical nature of reprocessing contracts, there is no significant exposure to price risk.

There is no significant exposure of the Group to liquidity risk due to the nature of its funding arrangement with DECC.

The NDA is required to place deposit deeds as collateral in respect of certain energy trading costs incurred. £2 million of such collateral is included within current trade and other receivables in both the Authority and Group Statement of Financial Position at 31 March 2016 (2015: £2 million). The risk of loss associated with these deposits is considered to be minimal.

In addition to this, a letter of credit is issued by a commercial bank on the NDA's behalf in favour of a certain supplier, with respect to energy trading costs. This does not give rise to a financial asset in the accounts of NDA Authority or Group.

# 19. Financial risk management

The NDA is financed by a combination of Government funding and commercial activities, and as such is not exposed to the degree of financial risk faced by other business entities. Consequently, financial instruments play a more limited role in creating and managing risk than would apply to a non-public sector body. It does however experience some degree of risk due to the variability of commercial income.

The NDA applies for funding as part of the Government Spending Review. This sets the annual expenditure limit net of the NDA's commercial income, derived from ageing power stations and reprocessing plants. The NDA is required to prioritise and allocate funding to deliver the required programme of work within this net limit, whilst mindful of the potential vulnerability of commercial income to plant breakdown. This is achieved through the use of an extensive reporting and control mechanism, which supports a portfolio based approach to managing the opportunities and risks within both the expenditure and commercial income. The approach has enabled the NDA to consistently control net expenditure within the prescribed limits set by the funding regime.

Separately the NDA has developed an extensive programme to embed risk management practices, covering both operational and financial risks, across all its functions and to provide contractual mechanisms to obtain assurance of good risk management practices from the SLCs. The primary financial risks faced by the NDA are commodity price risk and credit risk. Market risk, comprising foreign currency risk, liquidity risk and interest rate risk, is not considered to be a significant risk for the NDA.

### Commodity price risk

Commodity price risk is the risk or uncertainty arising from possible price movements and their impact on the commercial income and therefore ultimately on the funding requirements of the NDA.

The NDA aims to reduce commodity price risk by forward selling a proportion of forecast electricity production whilst minimising the risk of resultant loss from failing to meet production targets. The position is monitored on a monthly basis along with regular review of this forward selling strategy. The primary risk is that electricity prices will move adversely affecting commercial income between the time that the NDA's funding requirements are set and the time when revenues are recognised, exposure to which cannot be effectively hedged.

# Credit risk

Credit risk is the risk that a counterparty will default on its contractual obligations resulting in financial loss to the NDA. This risk is managed through the use of credit checking procedures for any new customers, and ongoing monitoring of the aging of receivables. The NDA has two types of contract, commodity contracts and supply and reprocessing contracts.

No sensitivity analysis has been performed in respect of any of the above risk areas, due to immateriality.

### 20. Other investments

	NDA G	NDA Group		ority
	2016 £m	2015 £m	2016 £m	2015 £m
Investments carried at fair value:				
Bank deposits	42	76	-	-
Managed investments	294	306	-	-
	336	382	-	-

Other investments include funds held within Rutherford Indemnity Limited in order to allow it to provide insurance for assets across the NDA estate.

### 21. Finance lease receivables

	NDA Group		Authority	
	2016 £m	2015 £m	2016 £m	2015 £m
Amounts receivable under finance leases:				
Not later than one year	1	1	1	1
Later than one year and not later than five years	6	6	6	6
Later than five years	178	179	178	179
·	185	186	185	186
Less: unearned finance income	(139)	(141)	(139)	(141)
Present value of minimum lease payments				
receivable	46	45	46	45

	Present va NDA Gr		mum lease payments Authority	
	2016 £m	2015 £m	2016 £m	2015 £m
Amounts receivable under finance leases:				
Not later than one year	1	1	1	1
Later than one year and not later than five years	6	5	6	5
Later than five years	39	39	39	39
Present value of minimum lease payments				
receivable	46	45	46	45

	Present va NDA Gr		num lease payments Authority	
	2016 £m	2015 £m	2016 £m	2015 £m
Of which: Non-current assets	45	44	45	44
Current assets Present value of minimum lease payments	1	1	1	1_
receivable	46	45	46	45

The finance lease receivable relates to:

- a) Land and buildings of the Springfields Fuels operation which was disposed of to Westinghouse Electric UK Holdings Limited by way of a 150 year lease on 1 April 2010. The interest rate inherent in the lease was fixed at the contract date for all of the lease term. The average effective interest rate contracted approximates to 3.50% per annum; and
- b) Certain land and buildings of the Capenhurst site which were disposed of to Urenco UK Ltd on 29 November 2012 by way of a combination of freehold and leasehold sales. The interest rate inherent in the lease was fixed at the contract date for all of the lease term. The average effective interest rate contracted approximates to 3.50% per annum.

The finance lease receivable balance is secured over the assets leased. The NDA is not permitted to sell or repledge the collateral in the absence of default by the lessee.

The maximum exposure to credit risk of the finance lease receivable is the carrying amount. The finance lease receivable is not past due and not impaired, and no allowance is made for uncollectible minimum lease payments receivable.

### 22. Trade and other receivables

	NDA Gr 2016 £m	oup 2015 £m	Autho 2016 £m	ority 2015 £m
Non-current:				
Prepayments	31	31	31	31
Other receivables	9	10	9	10
	40	41	40	41
Current:				
Trade receivables	29	112	282	356
Less: allowance for doubtful debts	-	-	-	-
	29	112	282	356
Accrued income	39	20	30	12
Other receivables	18	14	11	5
	86	146	323	373
Prepayments	7	12	3	7
VAT	72	69	71	69
	165	227	397	449

Non-current other receivables relate to lump sum payments made under early retirement arrangements to individuals working for SLCs who have retired early, or who have accepted early retirement, before 31 March 2016. These payments are refundable to the NDA from the appropriate pension scheme at or after the date on which the individual concerned would have reached normal retirement age.

# Credit risk

NDA sells the majority of the power generated to EdF Energy under the terms of a bi-lateral trading contract, with a small amount also being traded by EdF Energy on NDA's behalf and ultimately being sold to third party customers. The NDA's credit exposure position is reviewed monthly by the Electricity and Output Trading Committee (an NDA committee attended by representatives from EDF).

There exists a limited level of credit risk in respect of reprocessing contracts which is mitigated by the nature of the contracts, under which a high proportion of the income is paid in advance by customers

Included in the NDA Group's current trade receivables balance are receivables with a carrying amount of £5 million (2015: £2 million) which are past due at the reporting date for which the NDA has not recognised an allowance for doubtful debts as there has not been a significant change in credit quality and the amounts are still considered recoverable.

Ageing of current trade receivables:

ŭ ŭ	NDA Group		Authority	
	2016 £m	2015 £m	2016 £m	2015 £m
Neither impaired nor past due Not impaired but past due in the following periods:	75	105	333	355
within 30 days	4	2	-	1
31 to 60 days	1	4	-	-
61 to 90 days		1	-	
Total	80	112	333	356

Movement in the allowance for doubtful debts:

	NDA Group		Authority	
	2016 2015		2016	2015
	£m	£m	£m	£m
Balance at 1 April	-	-	-	-
Amounts recovered during the year	-	-	-	-
Balance at 31 March	=	=	=	-

In determining the recoverability of a trade receivable the NDA considers any change in the credit quality of the trade receivable from the date credit was initially granted up to the reporting date. The concentration of credit risk is limited due to the customer base being large and unrelated. Accordingly, the Authority believes that there is no further provision required in excess of the allowance for doubtful debts.

# 23. Cash and cash equivalents

	NDA Group		Autho	ority
	2016 £m	2015 £m	2016 £m	2015 £m
Balance at 1 April Net change in cash and cash equivalent	168	171	127	139
balances	(14)	(3)	(65)	(12)
Balance at 31 March	154	168	62	127
The balances at 31 March were held at:				
Commercial banks	85	33	-	(1)
Government Banking Service	69	135	62	128
	154	168	62	127

Cash and cash equivalents comprise cash and short-term bank deposits with an original maturity of three months or less.

# 24. Trade and other payables

	NDA Gr 2016 £m	oup 2015 £m	Autho 2016 £m	ority 2015 £m
Current:	<b>—</b>	2	2	2
Trade payables	174	134	167	117
Receipts to surrender to the Consolidated Fund	17	16	17	16
Other payables	4	8	1	1
Accruals	558	557	533	537
	753	715	718	671
Other taxes and social security	2	2	-	-
Payments received on account	700	850	695	848
Deferred income	18	6	10	4
_	1,473	1,573	1,423	1,523
Non-current:				
Payments received on account	1,425	1,495	1,424	1,488
Other payables	6	13		
	1,431	1,508	1,424	1,488

	NDA Group 2016 2015 £m £m		Auth 2016 £m	ority 2015 £m
Movements on gross payments received on account				
Balance at 1 April	5,849	6,035	5,840	6,030
Reclassification to accrued income	23	-	23	-
Revalorisation (see note 6)	87	51	87	51
Amounts received	515	652	516	652
Released to income	(772)	(889)	(770)	(893)
Balance at 31 March	5,702	5,849	5,696	5,840

	N	NDA Group		ority
	2016 £m	2015 £m	2016 £m	2015 £m
Gross payments on account at 31 March	5,702	5,849	5,696	5,840
Deduction of recoverable contract costs (see note 14)	(3,577)	(3,504)	(3,577)	(3,504)
Net payments on account at 31 March	2,125	2,345	2,119	2,336
Of which:				
Current	700	850	695	848
Non-current	1,425	1,495	1,424	1,488
	2,125	2,345	2,119	2,336

Trade and other payables and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. The NDA has procedures in place to ensure that all payables are paid within the pre-agreed credit terms. Payments received on account relate to amounts which customers have paid for the provision of services under long-term contracts. These payments will be recognised as income when the services are provided. Payments received on account are shown net after deduction of any applicable recoverable contract costs (see note 14).

None of the change, either during the year or cumulatively, in the fair value of the above liabilities is attributable to changes in the credit risk of those liabilities. There is no material difference between the liabilities' carrying amounts and the amounts that would be required to be paid at maturity to settle the obligations.

### 25. Nuclear Provisions

20. Nuclear Florisions	NDA Group Authority			
	2016	2015	2016	2015
	£m	£m	£m	£m
Balance at 1 April	69,874	64,944	69,808	64,857
Provided for in the year and charged to:				
- Statement of Comprehensive Net Expenditure (note 7)	90,209	5,853	90,209	5,855
- Recoverable contract costs (a) (note 14) Unwinding of discount charged to:	2,072	505	2,072	505
- Statement of Comprehensive Net Expenditure (note 7)	1,409	1,172	1,409	1,171
- Recoverable contract costs (a) (note 14)	35	30	35	30
Decommissioning costs utilised in the year (note 6)	(2,637)	(2,136)	(2,637)	(2,136)
Recoverable contract costs released in year (note 14)	(303)	(474)	(303)	(474)
Provision changes impacting property, plant and equipment (note 11)	13	(20)	_	_
Total change in provision	90,798	4,930	90,785	4,951
The state of the province of		1,000	00,100	.,
Balance at 31 March	160,672	69,874	160,593	69,808
Of which:				
Current	2,880	2,939	2,878	2,938
Non-current	157,792	66,935	157,715	66,870
	160,672	69,874	160,593	69,808

(a) The NDA has commercial agreements in place under which a portion of the expenditure required to settle certain elements of the Nuclear Provision are recoverable from third parties. Changes in the future cost estimates of discharging the Nuclear Provision are therefore matched by a change in recoverable contract costs. In accordance with IAS 37, these recoverable amounts are not offset against the Nuclear Provision but are treated as a separate asset. The amount recoverable at 31 March 2016 (NDA Group and Authority) is £5,008 million (2015: £3,204 million) - see note 14.

The discount implicit in recognising nuclear provisions is unwound over the life of the provisions, with the impact of the amortisation of one years' discount shown in adjustments to provisions in the Statement of Comprehensive Net Expenditure. An increase of 0.5% in the discount rate would reduce the provision to £132 billion, whilst a decrease in discount rate of 0.5% would increase the provision to £201 billion.

Changes in the cost estimates of discharging the nuclear provision (representing increase or decrease in future decommissioning costs, less under or overspend of decommissioning delivered in year) are charged to the adjustments to provisions in the Statement of Comprehensive Net Expenditure. This charge includes the impact of restating liabilities from March 2015 values to current price levels. The overall increase in the provision was £90,798million (2015: £4,930 million) of which the Authority estimates that £1,086 million related to changes in price levels (2015: £586 million).

The introduction of new discount rates (see page 23) in the current financial year produced an increase of £89,379 million (2015: £214 million increase).

A total of £2,940 million (2015: £2,610 million) has been released from the Nuclear Provision in the year to 31 March, being the amount provided for that year as at 31 March 2015.

Changes in the estimated future cost of decommissioning, related to commercial property, plant and equipment, are offset by matching changes in the value of the IAS 37 property, plant and equipment asset. An increase of £13 million was recognised in the year (2015: £20 million decrease).

Analysis of expected timing of discounted cashflows for the NDA Group Nuclear Provision is as follows:

follows:							
NDA Group	Waste £m	Research £m	Sellafield £m	Fuel manufacturing and generation £m	Others £m	2016 Total £m	2015 Total £m
Within 1 year	47	275	1,922	600	36	2,880	2,939
2 – 5 years	244	1,013	7,950	1,942	249	11,398	12,538
6 – 20 years	2,009	1,756	30,768	1,979	468	36,980	30,573
21 - 50 years	4,754	242	39,541	944	320	45,801	16,266
After 50 years	7,966	2,210	37,233	15,983	221	63,613	7,558
	15,020	5,496	117,414	21,448	1,294	160,672	69,874
Sensitivity							
Increase Reduction	36,585 (6,100)	550 (210)	112,500 (18,750)	6,160 (8,160)	194 (129)		

The NDA calculates its provision based on management's best estimate of the future costs of the decommissioning programme, which is expected to take until 2137 to complete. The NDA also considers credible risks and opportunities which may increase or decrease the cost estimate, but which are deemed less probable than the best estimate. These are the basis of the sensitivities identified above, and the key sensitivities are as follows:

- waste activities cover the Low Level Waste Repository and the GDF. Construction of the latter facility is currently planned to allow receipt of waste from around 2040. Key sensitivity is around the cost of constructing and operating the repository, which range from a £6,100 million reduction on the current estimate, to a £36,585 million increase.
- activities on the sites primarily used for research (Dounreay, Harwell, Winfrith and Windscale) are concerned with final decommissioning of assets and site clearance. Sites will be cleared

- by 2064. Options are being explored to accelerate site clearance, which in the case of Dounreay would reduce the provision by £210 million; an increase in the cost and/or a delay of past the latest anticipated Interim State date (2029) would increase the provision by up to £550 million.
- Sellafield represents activities associated with operation of the site, reprocessing and eventual
  decommissioning, and includes all site overheads. Principal sensitivities are around the cost of
  delivering the plan, particularly the costs of new construction, decommissioning and post
  operational clean out (POCO) work in the long-term (beyond the next twenty years). The
  potential costs range from a £18,750 million reduction against the current estimate, to a
  £112,500 million increase.
- fuel manufacturing and generation (which for this purpose includes Magnox and Springfields) programme of work includes defueling the generating stations and preparing for interim Care and Maintenance (complete by 2030) followed by a final site clearance phase around 2070 to 2102. The overall provision value may reduce depending on the extent of cost savings achieved following the PBO competition with, for example, a 35% overall saving reducing the provision by £8,160 million. The main cost risk is in the final site clearance phase, which may increase costs by £6,160 million.

### 26. Other provisions

NDA Group	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
Balance at 31 March 2014	82	1,426	38	1,546
Provided for in the year (see note 7)	5	556	1	562
Released in the year (see note 6)	(10)	(231)	(2)	(243)
Unwinding of discount (see note 7)	-	13	-	13
Balance at 31 March 2015	77	1,764	37	1,878
Provided for in the year (see note 7)	10	589	-	599
Released in the year (see note 6)	(10)	(160)	-	(170)
Unwinding of discount (see note 7)	· -	2	-	2
Balance at 31 March 2016	77	2,195	37	2,309

Authority	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
Balance at 31 March 2014	81	1,425	12	1,518
Provided for in the year (see note 7)	5	556	-	561
Released in the year (see note 6)	(11)	(231)	(1)	(243)
Unwinding of discount (see note 7)		14	=	14
Balance at 31 March 2015	75	1,764	11	1,850
Provided for in the year (see note 7)	10	589	-	599
Released in the year (see note 6)	(10)	(160)	-	(170)
Unwinding of discount (see note 7)		2	-	2
Balance at 31 March 2016	75	2,195	11	2,281

	NDA Group		Authority		
Analysis of net provisions	2016	2015	2016	2015	
	£m	£m	£m	£m	
Balance at 31 March	2,309	1,878	2,281	1,850	
Amount deducted from recoverable contract costs (see note 14)	(846)	(521)	(846)	(521)	
Net balance at 31 March	1,463	1,357	1,435	1,329	
Of which: Current	208	161	207	159	
2 to 5 years	426	513	424	511	
After 5 years	829	683	804	659	
Non-current	1,255	1,196	1,228	1,170	
	1,463	1,357	1,435	1,329	

Restructuring provisions have been recognised to cover continuing annual payments to be made under early retirement arrangements to individuals working for SLCs who retired early, or had accepted early retirement, before 31 March 2016. These payments continue at least until the date at which the individual would have reached normal retirement age. Lump sums paid to individuals on retirement are held as receivables, since they are refundable to the NDA from the appropriate pension scheme at or after the date on which the individual concerned would have reached normal retirement age.

Contract loss provisions have been recognised to cover the anticipated shortfall between total income and total expenditure on relevant long-term contracts. The above balances are shown net after deduction from any applicable recoverable contract costs (see note 14). The amount provided in the year for the contract loss provision relates to changes in estimates of the costs of existing contracts.

Other provisions include provisions for insurance claims and early retirements.

### 27. Retirement benefit schemes

The NDA Group has a range of pension schemes including both defined contribution and defined benefit plans.

### **Defined contribution schemes**

NDA and RWM employees have pension benefits provided through the PCSPS. The PCSPS is an unfunded multi-employer defined benefit scheme in which the NDA and RWM are unable to identify their share of the underlying assets and liabilities. The scheme actuary valued the scheme as at 31 March 2012 and details can be found in the resource accounts of the Cabinet Office: Civil Superannuation at http://www.civilservicepensionscheme.org.uk/about-us/resource-accounts/. In accordance with guidance issued by HM Treasury, the PCSPS is accounted for as a defined contribution scheme in these financial statements.

Direct Rail Services Limited (DRS) employees joining after 1 April 2008 participate on a defined contribution basis in the Combined Nuclear Pension Plan (CNPP).

International Nuclear Services Ltd (INSL) employees participate in the United Kingdom Atomic Energy Authority (UKAEA) Combined Pension Scheme, the CNPP and the Magnox Electric Group section of the Electricity Supply Pension Scheme. Participation in these schemes is in sections with other employers and INSL is unable to identify its share of the underlying assets and liabilities. Consequently INSL's participation in these schemes is accounted for as if they were defined contribution schemes, as permitted under IAS 19. INSL's contributions to these schemes are assessed as part of regular actuarial valuations of those schemes and will vary in line with the funding position of the relevant scheme.

Pacific Nuclear Transport Ltd (PNTL) employees participate in two industry wide defined contribution schemes: the Merchant Navy Officers' Pension Plan (MNOPP) and the Merchant Navy Ratings' Pension Plan (MNRPP).

The total cost charged to expenditure of £6,263,000 (2015: £5,342,000) represents contributions payable to these schemes by the Group at rates specified in the rules of the schemes. No contributions were outstanding at this or the previous year end.

### **Defined benefit schemes**

The Group participates in various pension schemes which are accounted for as defined benefit schemes.

### **GPS DRS section of the CNPP**

DRS participates in the GPS DRS section of the CNPP, a defined benefit (final salary) funded pension scheme. The defined benefit structure was available to all DRS employees until 31 March 2008 when it was closed to new entrants.

### Nirex section of the CNPP

The Nirex section of the CNPP is a defined benefit (final salary) funded pension scheme. The Nirex section was closed to new entrants on 1 April 2007 and has no active members.

### **Closed Section of the CNPP**

On the disposal of the Springfields Fuels operation the NDA took over direct responsibility of the pension liability within the Springfields Fuels section of the CNPP on 1 April 2010. The Closed section (formerly the Springfields Fuels Section) of the CNPP is a defined benefit (final salary) funded pension scheme. The Closed section was closed to new entrants and further accrual on 31 March 2010.

# **Merchant Navy Officers Pension Fund (MNOPF)**

PNTL employees participate in the Merchant Navy Officers Pension Fund (MNOPF). The MNOPF is an industry wide defined benefit (final salary) funded pension scheme. The scheme was closed on 1 November 1996. All costs relating to 'Pacific' vessels are recoverable under contract from customers and hence a recoverable amount is recognised to offset the related pension scheme deficit.

# **Merchant Navy Ratings Pension Fund (MNRPF)**

PNTL employees participate in the Merchant Navy Ratings Pension Fund (MNRPF). The MNRPF is an industry wide defined benefit (final salary) funded pension scheme. The scheme was closed on 31 May 2001. The liabilities of the scheme have been capped at the level of benefits accrued to employees at the closure date, subject to adjustment for future actuarial valuations. All costs relating to 'Pacific' vessels are recoverable under contract from customers and hence a recoverable amount is recognised to offset the related pension scheme deficit.

In relation to the CNPP it is noted that:

- The scheme is sectionalised and individual sections cannot be liable for any other sections' obligations under the rules of the scheme;
- There is no agreed allocation of any surplus or deficit should a participating employer
  withdraw from the scheme or on wind up. In such an event the participating employer's
  obligations would be subject to negotiation with the relevant scheme trustees in light of the
  funding position of the scheme at that time;
- The aggregate average duration of the CNPP obligation is 20 years (2015: 20 years), although this differs slightly by section.

In relation to the Merchant Navy schemes, whilst the schemes are sectionalised they operate on a "last man standing" basis such that a participating employer can become liable for part of the obligations of another participating employer should that employer withdraw from the scheme with underfunded obligations. The average duration of the Merchant Navy schemes obligations is 17 years (2015: 17 years).

Actuarial valuations for the various defined benefit schemes referred to above have been updated at 31 March 2016 by independent actuaries using assumptions that are consistent with the requirements of IAS 19 and the results of those calculations have been incorporated in the figures below. Investments have been valued for this purpose at fair value.

### Risks associated with the Group's defined benefit schemes

The defined benefit schemes expose the Group to a number of risks such as:

# Changes in bond yields

Pension liabilities are calculated using discount rates linked to bond yields which are subject to volatility. In order to mitigate this risk the schemes hold a proportion of their assets in bonds, which provide a hedge against falling bond yields.

### Investment risk

Some asset classes such as equities, which are expected to provide higher returns over the long term, are subject to short term volatility and may lead to deficits if assets underperform the discount rate used to calculate future liabilities. The allocation to such assets is monitored to ensure it remains appropriate given the schemes' long-term objectives.

### Inflation risk

Since most of the scheme liabilities are indexed in line with price inflation, higher than assumed levels of inflation will increase the liabilities. In order to mitigate this risk the schemes hold a proportion of their assets in index-linked bonds.

### Longevity risk

Increases in life expectancy will result in an increase in liabilities. The scheme actuaries regularly review actual experience of the scheme membership against the actuarial assumptions underlying the valuation of the liabilities and carry out detailed analysis when setting appropriate scheme specific mortality assumptions.

#### Other risks

There are a number of other risks involved in sponsoring defined benefit schemes including operational risks and legislative risks. The scheme trustees regularly assess these risks as part of their ongoing governance process.

One particular legislative risk is in relation to the equalisation of Guaranteed Minimum Pensions (GMPs). The UK Government has announced its intention to gender-equalise these benefits in accordance with sex discrimination legislation, although it is not clear when and how this will be achieved. GMP equalisation would likely increase the liabilities of the defined benefit schemes. However at this stage it is not possible to quantify the potential impact of this change and, in line with most UK reporting entities, the Group has not made any allowance in this year's accounting liabilities.

# **NDA Group**

# **Employee benefit obligations**

The amounts recognised in the Statement of Financial	2016	2015
Position are as follows:	£m	£m
Benefit obligations	223	250
Fair value of scheme assets	(222)	(231)
Deficit in schemes	1	19
Unrecognised asset under IAS 19 para 58b *	4	-
Receivable from third parties	-	(5)
Net deficit recognised in schemes	5	14

<sup>\*</sup> Relates to MNOPF and MNRPF schemes which would otherwise be in surplus, although position for all five schemes in aggregate is a net deficit

# **Statement of Comprehensive Net Expenditure**

The amounts recognised in the Statement of Comprehensive	2016	2015
Net Expenditure are as follows:	£m	£m
Current service cost	4	3
Net interest on net DB assets / liabilities	1	-
Net cost in SOCNE	5	3
Actuarial loss / (gain)	(18)	20
Movement in unrecognised asset under IAS 19 para 58b	4	-
Receivable from third parties	5	(2)
Actuarial loss / (gain) recognised in OCE	(9)	18

# Changes in the present value of the defined benefit obligations

The amounts recognised in the Statement of Financial	2016	2015
Position are as follows:	£m	£m
Opening defined benefit obligation	250	198
Current service cost	4	3
Net interest on scheme liabilities	8	8
Employee contributions	-	1
Actuarial loss / (gain)	(34)	46
Benefits paid	(5)	(6)
Closing defined benefit obligation	223	250

Changes in the fair value of the scheme assets are as follows:

	2016	2015
	£m	£m
Opening fair value of scheme assets	231	197
Interest income on scheme assets	7	8
Actuarial gain / (loss)	(16)	26
Employer contributions	5	5
Employee contributions	-	1
Benefits paid	(5)	(6)
Closing fair value of scheme assets	222	231

Changes in the value of unrecognised assets under IAS19 para 58b are as follows:

	2016 £m	2015 £m
Opening value of unrecognised assets	-	-
Movement in unrecognised assets	4	=
Closing value of unrecognised assets	4	-

Estimated expected employer contributions over the next financial year are as follows:

Estimated expected employer contributions over the next financial year are as follows:	
2016	2015
£m	£m
4	4

The major categories of plan assets as a percentage of total scheme assets are as follows:

	2016	2015
	%	%
Equities	48	43
Property	2	2
Fixed Interest Gilts	13	13
Index Linked Gilts	17	17
Corporate Bonds	18	21
Hedge funds	1	3
Cash	1	1
Total	100	100

Principal actuarial assumptions at the date of the SOFP (expressed in weighted averages):

	2016	2015
Discount rate	3.50%	3.20%
Future salary increases *	3.00% - 3.50%	3.00% - 3.50%
Rate of increase of pensions in payment	2.90% - 3.00%	2.90% - 3.00%
Rate of increase of pensions in deferment	2.00% - 3.00%	2.00% - 3.00%
Retail Price Inflation	3.00%	3.00%
Life expectancy for a male pensioner aged 65 (in years)	21.7	21.9
Life expectancy for a male non pensioner currently aged 45 from		
age 65 (in years)	23.0	23.2

<sup>\*</sup> For those schemes with members accruing benefits future salary increases for 2016 are assumed to be 3.00% for the next three years, 3.25% each of the following ten years, and then 3.50% thereafter.

Mortality assumption

merianty accumpation	
2016	2015
S1NA Year of Birth tables with CMI 2015	S1NA Year of Birth tables with CMI 2014
projections subject to minimum improvements of	projections subject to minimum improvements
1% trend for males and females	of 1% trend for males and females

	2016 £'000	2015 £'000	2014 £'000	2013 £'000	2012 £'000
Experience adjustments on plan liabilities	16	(2)	4	4	2
Experience adjustments on plan assets	(16)	27	(1)	16	(1)

Sensitivity analysis

Change to	Change in assumption	Impact on DB obligation as at 31/03/16	Change in assumption	Impact on DB obligation as at 31/03/16
Discount rate	Increase by 0.5%	-9%	Decrease by 0.5%	10%
Rate of salary increase	Increase by 0.5%	3%	Decrease by 0.5%	-2%
Rate of price inflation	Increase by 0.5%	10%	Decrease by 0.5%	-9%
Rate of mortality	Increase by 1 year	2%		

# **Authority**

# **Employee benefit obligations**

The amounts recognised in the Statement of Financial Position	2016	2015
are as follows:	£m	£m
Benefit obligations	114	124
Fair value of scheme assets	(113)	(115)
Deficit in schemes	1	9
Receivable from third parties	-	-
Net deficit recognised in schemes	1	9

# Statement of Comprehensive Net Expenditure

The amounts recognised in the Statement of Comprehensive	2016	2015
Net Expenditure are as follows:	£m	£m
Current service cost	-	-
Net interest on net DB assets / liabilities	(1)	-
Net cost in SOCNE	(1)	-
Actuarial loss / (gain)	(7)	9
Receivable from third parties	-	-
Actuarial loss / (gain) recognised in OCE	(7)	9

Changes in the present value of the defined benefit obligations

The amounts recognised in the Statement of Financial	2016	2015
Position are as follows:	£m	£m
Opening defined benefit obligation	124	102
Net interest on scheme liabilities	3	4
Actuarial loss / (gain)	(11)	20
Benefits paid	(2)	(2)
Closing defined benefit obligation	114	124

Changes in the fair value of the scheme assets are as follows:

	2016	2015
	£m	£m
Opening fair value of scheme assets	115	102
Interest income on scheme assets	4	4
Actuarial gain / (loss)	(4)	11
Benefits paid	(2)	(2)
Closing fair value of scheme assets	113	115

The Authority made contributions to the Authority's defined benefit pension schemes during the year. The value of these contributions was below the level of rounding used in the financial statements.

# Estimated expected employer contributions over the next financial year:

Estimated expected employer contributions over the next financial year are nil (2015: nil) as the Authority has no employees participating in any of these schemes.

The major categories of plan assets as a percentage of total scheme assets are as follows:

The image caregories of prime according to a personal age of the		
	2016	2015
	%	%
Equities	50	48
Property	-	-
Fixed Interest Gilts	-	-
Index Linked Gilts	25	26
Corporate Bonds	25	26
Cash	-	-
Total	100	100

Principal actuarial assumptions at the date of the SOFP (expressed in weighted averages):

	2016	2015
Discount rate	3.50%	3.20%
Future salary increases	-	-
Rate of increase of pensions in payment	2.90% - 3.00%	2.90% - 3.00%
Rate of increase of pensions in deferment	2.00% - 3.00%	2.00% - 3.00%
Retail Price Inflation	3.00%	3.00%
Life expectancy for a male pensioner aged 65 (in years)	21.7	21.9
Life expectancy for a male non pensioner currently aged 45 from		
age 65 (in years)	23.0	23.2

**Mortality assumption** 

mortanty accumption	
2016	2015
S1NA Year of Birth tables with CMI 2015	S1NA Year of Birth tables with CMI 2014
projections subject to minimum improvements of	projections subject to minimum improvements
1%trend for males and females	of 1%trend for males and females

	2016	2015	2014	2013	2012
	£m	£m	£m	£m	£m
Experience adjustments on plan liabilities	2	2	2	-	(1)
Experience adjustments on plan assets	(4)	11	2	8	(1)

Sensitivity analysis

Change to	Change in assumption	Impact on DB obligation as at 31/03/16	Change in assumption	Impact on DB obligation as at 31/03/16
Discount rate	Increase by 0.5%	-10.1%	Decrease by 0.5%	11.2%
Rate of salary increase	Increase by 0.5%	n/a	Decrease by 0.5%	n/a
Rate of price inflation	Increase by 0.5%	11.2%	Decrease by 0.5%	-10.1%
Rate of mortality	Increase by 1 year	1.9%		

# 28. Non-controlling interests

Non-controlling interests balance in 2016 is the non-controlling interests' share of the one remaining non-wholly owned subsidiary. In 2015 it was the aggregate of their share of the two non-wholly owned subsidiaries.

Group	2016 £m	2015 £m
At 1 April	2	2
Change in equity of non-controlling interests during year	-	-
At 31 March	2	2

# 29. Commitments under leases

# 29.1 (a) Operating leases - NDA as lessee

	NDA Group		Authority	
	2016 £m	2015 £m	2016 £m	2015 £m
Minimum lease payments under operating leases				
recognised as an expense in the period / year	11	13	2	2

Total future minimum lease payments under operating leases are given in the table below:

	NDA Group		Authority	
	2016 Sm	2015 £m	2016 Sm	2015
Buildings and other:	£m	2111	£m	£m
Not later than one year	18	10	2	2
Later than one year and not later than five years	69	33	9	9
Later than five years	20	13	37	38
•	107	56	48	49

Operating lease payments represent rentals payable by the Group for some of its properties, vehicles, locomotives and office equipment. All properties are rented on commercial terms and include office buildings with leases expiring between 2016 and 2044, and leases for industrial facilities with expiry dates between 2021 and 2146.

# 29.1 (b) Operating leases - NDA as lessor

Property rental income earned during the year amounted to £6 million (2015: £5 million).

Total future minimum lease receivables under operating leases are given in the table below:

	NDA Group		Α	Authority		
	2016 £m	2015 £m	2014 £m	2016 £m	2015 £m	2014 £m
Buildings: Not later than one year Later than one year and not later than five	3	4	5	3	3	2
years Later than five years	12 52	14 55	4 15	10 43	10 34	2 2
	65	73	24	56	47	6

Operating lease receipts represent rentals receivable by the Group in respect of various properties leased on commercial terms and historical agricultural lease agreements.

### 30. Contingent liabilities

Under the transfer scheme of 1 April 2005, the NDA has assumed responsibility for all occurrences relating to the designated nuclear sites that took place up to that date.

a. At 31 March 2016 the NDA held inventories of reprocessed Uranic material. These materials are currently held at nil value, due to uncertainty over their future use, which may result in as-yet-unquantified liabilities for the NDA.

b. Whilst not the lead employer, the NDA is the lead organisation and has ultimate responsibility for certain nuclear industry pension schemes, including the Combined Nuclear Pension Plan, the Magnox section of the ESPS, and the GPS Pension Scheme. Provisions for known deficits are included within Nuclear Provisions (note 25). However, movements in financial markets may adversely impact the actuarial valuations of the schemes, resulting in an increase in scheme deficits and consequent increase in nuclear provision.

# Contingent liabilities not required to be disclosed under IAS 37 but included for parliamentary reporting and accountability purposes:

The NDA has non-quantifiable contingent liabilities arising from indemnities given as part of the contracts for the management of the Low Level Waste Repository, Sellafield and Dounreay. These indemnities are in respect of the uninsurable residual risk that courts in a country which is not party to the Paris and Brussels Conventions on third party liability in the field of nuclear energy may accept jurisdiction to determine liability in the event of a nuclear incident. These are not treated as contingent liabilities within the meaning of IAS 37 since the possibility of a transfer of economic benefit in settlement is considered too remote.

### **International Carrier Bond**

During 2014/2015 the NDA procured a US Bond on behalf of their subsidiary, INS Ltd, in order to meet US law in respect of vessels calling at US ports for commercial purposes. This Bond is required to ensure that all duties, taxes and fees owed to the federal government are paid. The Bond would therefore only be called on in the case of non-payment of any of the above, and the total cost would not be expected to exceed \$100,000.

# Other contingent liabilities

The NDA is currently involved in an on-going legal case with EnergySolutions. It is not considered probable that this will result in an outflow of resources from the NDA.

### 31. Related parties

### **Government bodies**

The NDA is an Executive NDPB sponsored by DECC, which is regarded as a related party. During the year, the NDA has had various material transactions with DECC and with other entities for which DECC is regarded as the responsible department. The NDA receives grant financing from DECC.

In the course of its normal business the NDA enters into transactions with Government owned banks. In addition, the NDA has a small number of material transactions with other Government Departments and other central Government bodies.

#### Directors' transactions

During the year, no Board member, key manager or other related party has undertaken any material transactions with the NDA.

During the year, the NDA made socio-economic contributions to the value of £2 million (2015: £1 million) to Energy Coast West Cumbria Ltd (trading as Britain's Energy Coast), a company limited by guarantee which has a director in common with the NDA (see note 13). These transactions were conducted on an arm's length basis.

### Related party transactions

During the year, group companies entered into the following transactions with related parties:

### Trading transactions

Transactions between the Authority and its subsidiaries were as follows:

	Sale good par	ds to	Purch goods par	from	Amo owe rela pari	d by ted	Amo owe rela part	d to ted
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
Direct Rail Services Ltd	(27)	(31)	2	-	7	7	-	-
International Nuclear Services Ltd	(77)	(70)	1	3	203	204	-	-
NDA Properties Ltd	(18)	(7)	-	-	43	43	-	-
Pacific Nuclear Transport Ltd	-	-	2	2	-	-	-	-
Rutherford Indemnity Ltd	(3)	(2)	-	-	-	-	-	-
Radioactive Waste Management Ltd	(25)	(24)	1	1	-	-	-	-
NDA Archives Ltd	(1)	-	-	-	-	-	-	-

Sales of goods to related parties were made at arm's length prices. The amounts outstanding are unsecured and will be settled in cash. No guarantees have been given or received. No provisions have been made for doubtful debts in respect of the amounts owed by related parties.

### Loans to related parties

Amounts owed by DRS includes a loan of £7 million which is interest bearing at a fixed percentage above Bank of England base rate. The loan is repayable in 2016.

Amounts owed by NDA Properties Limited includes a loan of £20 million which is interest bearing at a fixed rate, repayable in instalments over twenty five years to 2038.

# Key management compensation

Key management includes Executive and Non-executive directors together with those members of senior management who form part of the Executive Team. The compensation paid or payable to key management for employee services is set out below in aggregate for each of the categories specified in IAS 24 'Related Party Disclosures'. Further information about the remuneration of individual directors is provided in the audited part of the Remuneration and Staff Report on pages 64 to 75.

	2016	2015
Authority	£'000	£'000
Short-term employee benefits	2,647	2,543
Post-employment benefits	310	324
Other long-term benefits	567	457
	3,524	3,324

# 32. Events after the reporting period

- IAS 10 requires the NDA to disclose the date on which the accounts are authorised for issue, which is the date of the Certificate and Report of the Comptroller and Auditor General.
- On 1 April 2016 100% of the issued share capital of Sellafield Ltd was acquired by NDA from Nuclear Management Partners (NMP); Sellafield Ltd thereby becoming a subsidiary of NDA.

# **NDA-Owned Subsidiary Reports**

# **Radioactive Waste Management Ltd**



We have responsibility for planning and ultimately delivering geological disposal of higher activity wastes in accordance with Government policy. This includes delivering a Geological Disposal Facility (GDF) as developer, and ensuring that radioactive wastes generated throughout the UK are conditioned and packaged in a manner suitable for eventual disposal.

During the year we worked with Government in delivering the programme of initial actions identified in the 2014 White Paper entitled 'Implementing Geological Disposal', and preparing the Company for formal engagement ready for the launch of the new siting process in 2017. This included undertaking a public consultation on national geological screening guidance, further organisational development to

support the Company's transition towards a developer organisation, and the appointment of a strategic communications partner.

The NDA as shareholder approved seven Corporate Targets as the basis for assessing our performance during the year and all but one of these has been delivered to time and quality.

Throughout the year the Company has worked with the nuclear industry to deliver a prioritised programme of advice on the packaging of radioactive waste, so that it is suitable for transport and disposal, and the roll out of a new form of contract with the SLCs.

Working in partnership with the supply chain through integrated project teams, we have delivered an improved scientific understanding of the bounding conditions within which disposal of the UK's separated uranium and wastes containing carbon-14 can be managed.

We have updated all research status reports supporting the safety case and continued to develop the specification, design, safety case and environmental and sustainability assessments for the generic disposal system in preparation for publication of the Generic Disposal System Safety Case update in November 2016.

Radioactive Waste Management Ltd has in place a Quality Assurance framework for the classification, specification, development and assurance of all business critical models. These procedures have been audited during the year to ensure they remain appropriate and are in line with the 2013 Macpherson Review recommendations.

**Bruce McKirdy Managing Director** 

# **Direct Rail Services Ltd**



Direct Rail Services Ltd (DRS) was established in 1995 to provide a safe, secure and reliable rail service for the transportation of nuclear material. The key focus for DRS remains the continued safe and secure delivery of all of its nuclear transport commitments.

During 2015/2016, in addition to delivering all of its nuclear commitments, DRS successfully provided support to the rail passenger market, through the deployment of some of its existing and some of its technologically advanced Class 68 locomotives, and to Network Rail in its infrastructure renewals programme.

DRS continues to be the safest, most secure and environmentally conscious Freight Operating Company in the UK and officially retains its position as 'The Best Performing Rail Freight Operator'.

Recognising the importance of nuclear new build, DRS continues to be actively involved in developing integrated rail transport solutions to unlock potential savings for the industry.

# Key developments in 2015/2016 include:

- successful delivery of all nuclear material transport programmes from national locations to Sellafield.
- Health and Safety performance sustained and significantly better than rail industry levels.
- supporting the NDA Socio Economic agenda by working with the business community in developing transport opportunities.
- disposal route for redundant flask carrying wagons developed and operational.
- introduction and operation of rail passenger services on behalf of Train Operating Companies (TOCs)

Alan Moore Executive Chair

# **International Nuclear Services Ltd**



International Nuclear Services Ltd (INS) manages a portfolio of UK and international contracts for nuclear fuel recycling and nuclear transport services on behalf of the NDA. INS operates Pacific Nuclear Transport Ltd (PNTL), a subsidiary company, which is the world's leading shipper of nuclear materials.

This year, in support of the NDA's long-term clean-up mission, INS has successfully delivered a number of key strategic transport projects to, from and between sites.

Key specialist transport missions undertaken by INS this year have further cemented its position as a key strategic asset capable of supporting the UK's commitment to global nuclear security, a significant contribution that

was highlighted at the 2016 Nuclear Security Summit in Washington DC.

In addition to our transport capabilities, INS markets the portfolio of nuclear knowledge and experience that constitutes the NDA's intellectual property. In this regard we continue to make good progress in connecting UK clean-up expertise with opportunities in the Asian market.

Finally, PNTL celebrated its 40<sup>th</sup> anniversary this year. Since it was established in 1975, PNTL has successfully completed more than 180 shipments around the world from its home port in Barrow, clocking up more than 5 million miles of sailing without a single incident resulting in the release of radioactivity.

# Key Developments in 2015/2016 include:

- Return of overseas waste INS successfully completed returns of vitrified high level waste
  to Japan and to Switzerland in 2015. This is part of the Vitrified Residue Returns programme,
  a key component of the NDA's strategy for the Sellafield site, fulfilling contracts with overseas
  customers and to deliver UK Government policy.
- Dounreay historic nuclear materials consolidation INS is playing a key role in the
  ongoing programme to transfer the materials from Dounreay as part of the work to consolidate
  the material at Sellafield.
- Supporting global security In early 2016, INS was responsible for a high security shipment
  of nuclear materials from Germany and Switzerland to the United States. Movements of this
  type support international non-proliferation goals which aim to consolidate and minimise
  inventories of nuclear material around the world.
- Transport of sealed sources INS has developed a new disposal route that provides a safe and secure transport system for UK sealed sources. Several transports have now been delivered successfully.
- Connecting British Businesses in Japan On behalf of the NDA, INS has continued to work closely with UK Trade and Investment to ensure that progress can be made, using INS's presence in Tokyo, to create real opportunities for British nuclear expertise in the Japanese decommissioning market.
- Marketing NDA Nuclear Knowledge The NDA estate has a wealth of specialist skills and
  experience which is of value to the wider nuclear industry, both within the UK and overseas.
  INS has made good progress in efforts to exploit this intellectual property internationally and
  deliver value for the UK taxpayer.

Mark Jervis Managing Director

# **NDA Properties Ltd**



NDA Properties Ltd acts as the property management company for nonoperational properties outside the nuclear licensed sites, in accordance with the NDA's Land and Property Management Strategy. It continues to optimise the use of properties where they are of value to the estate and is undertaking a programme of selective property development activity and disposal of surplus assets.

During the year the company has commenced work on two major developments. The £21 million building, which will house the NDA archive is being constructed adjacent to Wick Airport in Caithness. When complete in autumn 2016, the facility (Nucleus - The Nuclear and Caithness Archive) will be leased to NDA Archives Ltd, and will also be host to the archive records of the Highland Council. The second major development is a new training facility to be used by the Civil Nuclear Constabulary for training of firearms officers. Site works have commenced, and the £42 million

construction project is scheduled for completion by December 2017.

The company continues to divest those properties which are surplus to the requirements of the estate. During the year the disposal of virtually all of the Berkeley Centre site to Stroud College was completed, securing £2.2 million income.

Options for the refurbishment of Hinton House in Warrington continue to be evaluated to ensure that these will meet the future requirements of the principal tenant, Sellafield Ltd.

The company works closely with external property specialists to manage the programme of activity necessary to ensure the integrity of its diverse portfolio of assets. Given the increasing workload from the development projects, the company is constantly reviewing its management arrangements to ensure that they remain fit for purpose, particularly in respect of the Construction (Design and Management) Regulations which were substantially changed in 2015.

David Atkinson Managing Director

# **Rutherford Indemnity Ltd**



Rutherford Indemnity Ltd is a licensed insurance company, registered in Guernsey and regulated by the Guernsey Financial Services Commission. The company provides insurance cover for the NDA and its estate.

### **Transacting Insurance**

The company participates in most of the NDA's insurance programmes, principally those providing protection against property, nuclear liability and general liability losses. It retains a prudent proportion of the risks underwritten in line with its risk appetite and risk tolerance (approved by the NDA) and where it makes financial and commercial sense to do so. These arrangements transfer volatility from the NDA's budget, and by demonstrating a significant financial commitment to the insurance markets, enable the NDA to secure appropriate financial protection on competitive terms. This also allows the NDA to benefit from access into the reinsurance protection, at lower cost, for the larger and more volatile risks from commercial reinsurers with approved security ratings.

The company continues to work closely with the NDA to help reduce the costs of insurable risks, including provision of tailored risk management information and participating in the NDA's annual insurance workshop.

The company continues to meet all of the applicable regulatory solvency requirements, including the enhancements introduced on 1 May 2015, and the new Finance Sector Code of Corporate Governance which became effective on 1 April 2016.

Over the next three years, the company will continue to focus on the provision of insurance cover for the NDA and its estate, with particular focus on nuclear liability cover and provision of support for changes arising from expected revisions to the Nuclear Installation Act 1965.

# **Investment Management**

The company aims to match its assets with its insurance liabilities. This objective is delivered primarily by three fund managers with distinct investment styles operating against a common mandate, with an additional allocation to property.

The investment portfolio has generated a small net loss for the year of approximately 0.6% reflecting volatility in financial markets. However, the company's investment strategy with strict limits on risk and with diversification of both assets and managers has limited losses as intended. The company remains on track to achieve its target returns of CPI+2% over a 5 year period.

During the year the company has entered into loan arrangements with two of the NDA's subsidiary companies, allowing those entities to invest in revenue generating capital assets in support of the NDA's strategic objectives. The loans help to reduce the volatility of the company's total investments, and whilst they are long-term and relatively illiquid, they represent less than 5 percent of the company's overall investments.

The company continues to apply strict credit and ethical investment criteria and to ensure that investment performance and capital security are closely monitored.

# **Operational Efficiency**

Management services for the company are sourced on a commercially tendered basis from approved providers, and are continually scrutinised to ensure they represent value for money.

John Langlois OBE Chairman

# **NDA Archives Ltd**



NDA Archives Ltd's principal objective is to oversee the effective long-term management of records in accordance with the various statutes, regulatory and business-led requirements to manage, protect and make available these records to the standards required of a responsible public body. The need to actively manage many of these records will outlive the organisation that created them resulting in a requirement for a centralised management solution and a compliant, secure and accurate system to ensure appropriate access to information to the next organisation responsible (e.g. nuclear waste records to an operator of a GDF).

An accredited facility is being established to manage the information assets of the UK's civil nuclear estate that are within the responsibility of the NDA. This facility (Nucleus - The Nuclear and Caithness Archive) is located in Wick in Caithness and, once operational in 2016, will be managed by an appointed Commercial Partner who will contribute records management and archiving expertise, together with suitably qualified and

experienced staff. The Commercial Partner has been appointed and successfully taken over the management of an existing archive facility within the NDA estate at Harwell.

The NDA Archives Ltd board has met regularly throughout the year and will soon be looking to receive and approve the Commercial Partner's one and five year Business Plans. These plans will act as an enabler to the NDA's Information Governance Strategy and the underpinning Information Governance Programme (IGP).

Simon Tucker Managing Director

# Introduction to the Site Licence Companies

The following pages give a brief report on each of the NDA's designated sites, grouped by the entity which holds the site operating licence.

The reports cover progress towards delivering key milestones and activities outlined in our 2015/2018 three year Business Plan.

The HSSSE Report on page 41 provides an overview of the health, safety and environmental incidents reported during 2015/2016.

More detail regarding the performance of our estate can be found on our website www.nda.gov.uk

### How to read the SLC reports

Below are some definitions of key concepts and terminology that are used throughout this section of the Annual Report and Accounts.

### Key milestones and deliverables

Key milestones are agreed at the start of each financial year to enable the effective measurement of progress against objectives through agreed reporting procedures. The milestones and activities listed for each site are taken from the 2015/2016 NDA Business Plan and are colour coded to reflect the strategic themes to which the target belongs, consistent with the Business Plan.

- Missed the key milestone or activity was due for completion before 31 March 2016 and as at that date there had been a delay against the planned schedule and the target has been missed
- Behind Target the key milestone or activity was due for completion after 31 March 2016 and as at that date there had been a delay against the planned schedule with possibility of recovery
- On Target the key milestone or activity was due for completion after 31 March 2016 and as at that date was on track to be completed to schedule
- Complete the key milestone or activity has been completed during the financial year (2015/2016)
- Deferred activity deferred due to re-prioritisation and/or reallocation of funding

# Other site information

Site Licensee or Site Licence Company (SLC)

This is the entity that holds the nuclear site licence and discharge authorisations in respect of a nuclear licensed site and which is directly responsible for day to day site management and operations

# **Sellafield Ltd**



Sellafield Ltd is the SLC responsible for the operation of Sellafield, including Calder Hall and Windscale nuclear licensed sites. The site is led by Paul Foster, Chief Executive Officer and is located in Seascale, Cumbria.

The PBO of the company for the 2015/2016 financial year was Nuclear Management Partners Ltd (NMP), a consortium compromising AECOM (formerly URS), AMEC Foster Wheeler and AREVA. From the 1 April 2016 Sellafield Ltd became a wholly owned subsidiary of the NDA.



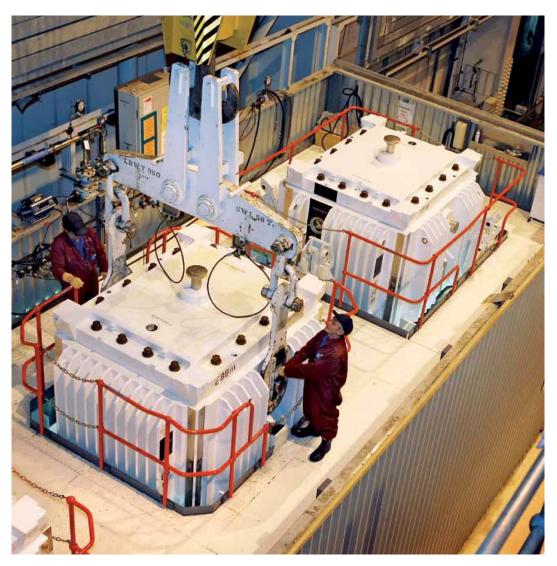
Paul Foster Chief Executive Officer

# Key progress areas against 2015/2016 targets

2015/2016 Business Plan Activities	Status		
Site Restoration			
Pile Fuel Storage Pond			
Continue consolidation of sludge within the pond	On Target		
Continue with consolidation and export of contaminated metals for treatment and storage	On Target		
Continue consolidation and export of metal fuel from the pond and wet bays	Complete		
Completion of export of Canned Oxide Fuel from the pond	Complete		
Pile Fuel Cladding Silo Programme			
Continue development of the capability to retrieve waste	On Target		
First Generation Magnox Storage Pond			
Active commissioning of Sludge Packaging Plant 1	Complete		
Ongoing export of material from wet bays	On Target		
Continue to develop capability to support export of material from the pond	On Target		
Magnox Swarf Storage Silo			
Continue to develop the downstream capability to receive and treat material from this facility	On Target		
Commence installation of Silo Emptying Plant 2 machine	Complete		

2015/2016 Business Plan Activities	Status
Commence construction of the Silo Maintenance Facility flask loading and maintenance cave	Complete
Decommissioning	
Continue the decommissioning and demolition of the diffuser from Windscale Chimney Pile	On Target
Continue work to support demolition of First Generation Magnox Reprocessing stack	On Target
Spent Fuels	
Continue to reprocess Magnox spent fuel in line with the Magnox Operating Programme (MOP9)	On Target
Complete all receipts of 'out of reactor' breeder material from Dounreay	Complete
Continue to receive and manage AGR spent fuel from EDF Energy	On Target
Continue to reprocess oxide spent fuel through THORP from EDF Energy and overseas customers	On Target
Continue preparations for the long-term interim storage of AGR spent fuel following the completion of THORP reprocessing	On Target
Nuclear Materials	
Continue the safe and secure storage of plutonium in line with UK policy	On Target
Receive first transports of exotic fuel from Dounreay	Complete
Continue the implementation of a programme for the transfer of materials from Harwell	On Target
Integrated Waste Management	
Continue to process HAL through the Waste Vitrification Plant	On Target
Continue to repatriate overseas owned vitrified waste to its country of origin	On Target
Progress inactive commissioning of Evaporator D	On Target
Continue to generate savings and preserve capacity at the Low Level Waste Repository (LLWR) by diversion of materials	On Target

2015/2016 Business Plan Activities	Status
Critical Enablers	
Continue the Sellafield infrastructure enhancement programme	On Target
Continue with the capability improvements programme (Excellence Plan)	On Target
Support Small & Medium Enterprise organisations by increasing overall spend with them to 22%	Missed



Advanced Gas-Cooled Reactor (AGR) fuel arriving for reprocessing at Sellafield.

# **Magnox Ltd**



Magnox Ltd is the SLC responsible for the management and operation of the Berkeley, Bradwell, Chapelcross, Dungeness A, Hinkley Point A, Hunterston A, Oldbury, Trawsfynydd, Sizewell A and Wylfa sites. On 1 April 2015, following a successful re-licensing application the former RSRL sites, Harwell and Winfrith, were added to the Magnox estate.

The PBO of the company is Cavendish Fluor Partnership (CFP), a consortium compromising Cavendish Nuclear and Fluor Corporation.



Kenny Douglas Managing Director

# Key progress areas against 2015/2016 targets

2015/2016 Business Plan Activities	Status
Site Restoration	
Delivery of programmisation principles across Magnox SLC	On Target
Continuation of estate decommissioning and demolition activities	On Target
Spent Fuel	
Management of MOP9 and coordination of Magnox fuel management activities with Sellafield	On Target
Progression of Oldbury defuelling	Complete
Nuclear Materials	
Delivery of the southern sites nuclear materials programme activities	On Target
Integrated Waste Management	
Delivery of the Magnox elements of the estate-wide Low Level Waste management plan	On Target
Business Optimisation	
Optimisation of electricity generation at Wylfa	Complete
Support to NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal	On Target

2015/2016 Business Plan Activities	Status
Critical Enablers	
Complete consolidation activities in support of the new contract under one PBO	Missed
Information Assurance Maturity Model - progression of delivery of enabling activities	On Target
Support Small & Medium Enterprise organisations by increasing overall spend with them to 22%	Complete
Development of Interim Care & Maintenance and Interim End State approaches, utilising revised management arrangements	On Target



Dungeness A turbine hall demolition

# Berkeley, Gloucestershire

2015/2016 Business Plan Activities	Status	
Integrated Waste Management		
Continuation of ILW plant retrievals and packaging	On Target	

# Bradwell, Essex

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into early effective Care and Maintenance	Behind Target
Reactor buildings safestore – weather envelope completed	Missed
Integrated Waste Management	
Continue Fuel Element Debris (FED) dissolution and retrievals	Behind Target

# Chapelcross, Dumfries & Galloway

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Interim Care and Maintenance	On Target
Complete bulk asbestos removal from third and fourth reactor buildings	Complete

# **Dungeness A, Kent**

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Interim Care and Maintenance	On Target

# Harwell, Oxfordshire

2015/2016 Business Plan Activities	Status
Site Restoration	
Continuation of decommissioning and demolition activities	On Target
Decommissioning of redundant facilities	On Target
Nuclear Materials	
Continuation of the programme for the transfer of nuclear materials and contact-handled ILW	On Target
Integrated Waste Management	
Recovery, processing and packaging of solid ILW	On Target

# Hinkley Point A, Somerset

2015/2016 Business Plan Activities	Status
Site Restoration	
Ongoing activities for the draining and stabilisation of Reactor 1 ponds	Complete
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	On Target
Integrated Waste Management	
Continuation of FED retrieval activities and establishment of buffer storage arrangements	On Hold

# **Hunterston A, Ayrshire**

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	On Target
Completion of the pond floor surfaces stabilisation	Missed
Integrated Waste Management	
Progressing of ILW retrievals, processing and storage activities	On Target

# Oldbury, South Gloucestershire

2015/2016 Business Plan Activities	Status
Site Restoration	
Preparations for decommissioning and hazard reduction	On Target
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	On Target
Spent Fuels	
Continue reactor defueling in line with MOP9	Complete

# Sizewell A, Suffolk

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	On Target

# Trawsfynydd, Gwynedd

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	Behind Target
Strategy agreed for ponds Interim End State entry  End state definition for Ponds complex is being challenged and discussed with the regulators	Behind Target
Integrated Waste Management	
Progressing of encapsulation of Fuel Element Debris	Behind Target

# Winfrith, Dorset

2015/2016 Business Plan Activities	Status
Site Restoration	
DRAGON reactor – integrated scheme design completed	Complete
Continuation of decommissioning and demolition activities	On Target
Steam-generating heavy water reactor (SGHWR) – continue decommissioning of the primary containment areas	On Target
SGHWR – completion of the contract award for reactor core detailed scheme design and build	Complete

# Wylfa, Anglesey

2015/2016 Business Plan Activities	Status
Site Restoration	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	On Target
Spent Fuels	
Defuelling activities in line with MOP9	On Target
Business Optimisation	
Continued electricity generation	Complete



# **Dounreay Site Restoration Ltd**



Dounreay Site Restoration Ltd (DSRL) is the SLC responsible for the operation of the Dounreay site in Caithness, Scotland. The site is led by Phil Craig, Managing Director.

The current PBO is Cavendish Dounreay Partnership Ltd (CDP), a consortium comprising Cavendish Nuclear Ltd, CH2MHill and AECOM.



Phil Craig Managing Director

# Key progress areas against 2015/2016 targets

2015/2016 Key Activities	Status
Site Restoration	
Decontamination of Prototype Fast Reactor pond to meet regulatory requirements	Missed
Nuclear Materials	
Completion of construction of new fuel characterisation facilities	Missed
Integrated Waste Management	
Material Test Reactor raffinate immobilisation complete	Complete
Critical Enablers	
Continuous improvement in health, safety and environmental performance	Behind Target



More than 5,000 drums of solid low level waste have now been crushed at Dounreay following the replacement of a vital compacting machine.

# **Low Level Waste Repository Ltd**



Low Level Waste Repository Ltd (LLWR) is the SLC responsible for the operation of the LLW site near the village of Drigg in Cumbria and delivering the National Programme for lower activity radioactive waste on behalf of the NDA.

The PBO of the company is UK Nuclear Waste Management Ltd, a consortium comprising AECOM, Studsvik and AREVA.



**Dennis Thompson Managing Director** 

# Key progress areas against 2015/2016 targets

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2015/2016 Key Activities	Status
Site Restoration	
Ongoing site preparation for phased construction of the final cap for trenches 1 to 7 and for Vault 8	On Target
Ongoing decommissioning of Plutonium Contaminated Material facilities	On Target
Engaging with key stakeholders to progress environmental permits and planning approvals for continued use of the site	On Target
Integrated Waste Management	
Continue segregated waste, treatment and disposal services in line with UK Low Level Waste Strategy	On Target
Work with consigning SLCs to improve waste forecasts and the waste inventory	On Target
Delivery of the National LLW Programme to optimise LLW Strategy implementation	On Target
Complete the review of the UK Nuclear Industry Solid Low Level Waste Strategy	Complete
Critical Enablers	
Support Small & Medium Enterprise organisations by increasing overall spend with them to 22%	Complete
Continue to pursue overall cost savings in delivery of the Lifetime Plan	On Target
Maintain the momentum of the supply chain investment in waste treatment arrangements	On Target
Continue upgrades to the infrastructure	On Target

# **Springfields Fuels Ltd**

Springfields Fuels Ltd (SFL) is responsible for the operation of the Springfields fuel manufacturing site.

Springfields is a nuclear fuel manufacturing site and is located near Preston in Lancashire. The site manufactures a range of fuel products for both UK and international customers and decommissions historic uranic residues and redundant facilities.

From April 2010, the NDA permanently transferred ownership of the company to Westinghouse Electric including the freedom to invest for the future under the terms of a new 150 year lease. SFL is contracted to provide decommissioning and clean-up services to the NDA to address historic liabilities arising prior to the sale.



2015/2016 Key Activities	Status
Site Restoration	
Continue the Post Operational Clean Out (POCO) and decommissioning of redundant buildings including fuel production and assembly plants, hex production plant and associated facilities.	On Target
Nuclear Materials	
Processing of historic and offsite residues through various facilities to make ready for safe long-term storage whilst recovering any uranium for return to the nuclear fuel cycle.	On Target
Continue the management and disposal of legacy wastes.	On Target
Complete cylinder washing and disposal processes.	On Target

# **Capenhurst Nuclear Services Ltd**

Capenhurst Nuclear Services Ltd is responsible for the operation of the Capenhurst site.

The Capenhurst site is located near Ellesmere Port in Cheshire, and was formerly home to a uranium enrichment plant and associated facilities that ceased operation in 1982.

In 2012, the site was transferred to URENCO, owners of the adjacent licensed site, and was amalgamated into a single nuclear licence paving the way for URENCO to invest in new facilities as required in order to meet future customer demand. As part of this transfer Capenhurst Nuclear Services is contracted to provide responsible management of uranic



materials and carry out remediation work on its behalf. The company manages 95% of the NDA's uranic inventory and provides broader decommissioning and remediation works for redundant facilities, in order to utilise space to maximise efficiency.

The NDA and URENCO have also signed an agreement for the processing of Government-owned by-product/legacy material from uranium enrichment (known as 'Tails') through URENCO's Tails Management Facility.

2015/2016 Key Activities	Status
Site Restoration	
Continue the decommissioning of redundant areas including completion of the site wide asbestos remediation project.	On Target
Continue land remediation projects such as East Side Curtilage.	On Target
Nuclear Materials	
Conclusion of reference design phase for the Legacy Cylinder Facility.	Behind Target
Conclusion of Hex bottle washing operations and the Post Operational Clean Out (POCO) of facility.	Complete
Continue the safe storage of uranic material including the over drumming of Magnox Depleted Uranium and upgrading of storage facility.	On Target
Continue the safe management and disposal of legacy wastes and residues.	On Target

# Glossary

AGR	Advanced Gas-Cooled Reactors		
BEC	Britain's Energy Coast		
BECBC	Britain's Energy Coast Business Cluster		
BNFL	British Nuclear Fuels Ltd		
C&AG	Comptroller and Auditor General		
CDP	Cavendish Dounreay Partnership		
CEO	Chief Executive Officer		
CFO	Chief Financial Officer		
CFP	Cavendish Fluor Partnership		
CNPA	Civil Nuclear Police Authority		
CNPP	Combined Nuclear Pension Plan		
CNS	Civil Nuclear Security programme		
CoNE	Centre of Nuclear Excellence		
CPNI	Centre for the Protection of the National Infrastructure		
CSARP	Cyber Security & Resilience		
DCICs	Programme Ductile Cast Iron Containers		
DDP	Decommissioning Delivery Partnership		
DECC	Department of Energy and Climate Change		
DEL	Departmental Expenditure Limit		
DFR	Dounreay Fast Reactor		
DRAGON	Name given to high temperature gas reactor at Winfrith		
DRS	Direct Rail Services Ltd		
DSRL	Dounreay Site Restoration Ltd		
EA	Environment Agency		
EAP	Employee Assistance Programme		
EU	European Union		
Euratom	European Atomic Energy Community		
FED	Fuel Element Debris		
FGMSP	First Generation Magnox Storage Pond		
FHP	Fuel Handling Plant		
GDF	Geological Disposal Facility		
GGC	Greening Government Commitments		
GHG	Greenhouse Gas		
GREEN	Gloucestershire Renewable Energy and Nuclear		
HAL	Highly Active Liquor		
HMG	Her Majesty's Government		
HSE	Health and Safety Executive		

HSSSE	Health, Safety, Security, Safeguards, Environment			
IAEA	International Atomic Energy Agency			
IAMM	Information Assurance Maturity Model			
IFRS	International Financial Reporting Standards			
IGP	Information Governance Programme			
IGS	Information Governance Strategy			
ILW	Intermediate Level Waste			
INES	International Nuclear and Radiological Event Scale			
INS	International Nuclear Services			
ISO	International Standards Organisation			
LLW	Low Level Waste			
LLWR	Low Level Waste Repository			
LP&S	Legacy Ponds & Silos			
LTA	Lost Time Accident			
LTIP	Long-Term Incentive Plan			
MODP	Magnox Optimised Decommissioning Programme			
MOP9	Magnox Operating Programme			
MSSS	Magnox Swarf Storage Silo			
NAO	National Audit Office			
NDA	Nuclear Decommissioning Authority			
NDPB	Non Departmental Public Body			
NED	Non-Executive Directors			
NMP	Nuclear Management Partners			
NNL	National Nuclear Laboratory			
NOx	Nitrogen Oxide			
NSAN	National Skills Academy - Nuclear			
ODA	Olympic Delivery Authority			
ONR	Office for Nuclear Regulation			
PBO	Parent Body Organisation			
PCSPS	Principal Civil Service Pension Scheme			
PFCS	Pile Fuel Cladding Silo			
PFR	Prototype Fast Reactor			
PFSP	Pile Fuel Storage Pond			
PNTL	Pacific Nuclear Transport Ltd			
POCO	Post Operational Clean Out			
PP14	Performance Plan 14 Sellafield			
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QSPGM	Quarterly Strategy, Policy and Governance Meetings			
R&D	Research and Development			
RAP	Retrievals Access Penetration			
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations			
RoSPA	Royal Society for the Prevention of Accidents			
RSA	Radioactive Substances Act			
RSRL	Research Sites Restoration Ltd			
RWM	Radioactive Waste Management Ltd			
SDP	Silos Direct encapsulation Plant			
SEP	Silo Emptying Plant			
SEPA	Scottish Environment Protection Agency			
SFL	Springfields Fuels Ltd			
SGHWR	Steam Generating Heavy Water Reactor			
SIRO	Senior Information Risk Owner			
SLC	Site Licence Company			
SME	Small & Medium Enterprises			
SoDA	Schedule of Delegated Authority			
SPP1	Sludge Packaging Plant			
SSA	Shared Services Alliance			
TCIF	Target Cost Initiative Fee			
THORP	Thermal Oxide Reprocessing Plant			
TOCs	Train Operating Companies			
UKGI	UK Government Investments (formerly Shareholder Executive until 1 April 2016)			
UKTI	UK Trade & Industry			
UTC	University Technical College			
VLLW	Very Low Level Waste			
WAGR	Windscale Advanced Gas-Cooled Reactor			
WiN	Women in Nuclear			
WRACS	Waste Receipt Assay Characterisation and Supercompaction			
YES	Youth Employment Scheme			

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