Nuclear
Decommissioning
Authority

Annual Report & Accounts
2016/17

HC269

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Decommissioning
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Annual Report & Accounts 2016/17

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Front cover images:
Top left - Bradwell in 2010

Bottom left - Bradwell in 2016

Top right - Nucleus, the Nuclear and Caithness Archives at Wick

Bottom right - Working at the Pile Fuel Cladding Silo, Sellafield

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The Nuclear Decommissioning Authority (NDA) is a Non-Departmental Public Body (NDPB) created through the Energy Act 2004.

We employ just over 200 staff. Our headquarters are based in west Cumbria and we own 17 nuclear sites across England, Wales and Scotland, some dating back to the 1940s, plus the associated liabilities and assets.

We report to the Department for Business, Energy and Industrial Strategy (BEIS); for some aspects of our work in Scotland, we are responsible to Scottish ministers.

Our role is strategic: we establish the overall approach, allocate budgets, set targets and monitor progress.

We do not have a hands-on role in cleaning up our facilities. Instead, we deliver our mission through others, primarily Site Licence Companies (SLCs).

We are responsible for

- Decommissioning and cleaning up these nuclear facilities
- Ensuring that all waste products, both radioactive and non-radioactive, are safely managed
- Implementing policy on the long-term management of nuclear waste
- Developing UK-wide strategy and plans for nuclear Low Level Waste (LLW)
- Scrutinising the decommissioning plans of EDF Energy, who own the operating fleet of Advanced Gas Cooled Reactor (AGR) nuclear power stations

Contents

Performance

TOM SMITH
Chairman

Chairman's Statement

I was honoured to be appointed as the NDA Chairman last year. Having been a non-executive member of the NDA Board since 2013, I am delighted now to have the opportunity to lead it.

We will vigorously seek to go on improving our performance year on year

Our performance in clean-up and decommissioning

Cleaning up and decommissioning the UK's civil nuclear legacy is of the utmost national safety and security importance. I am pleased that the government continues to commit sustained levels of public funding to our mission. But this rightly puts a great responsibility on us to spend that money wisely and deliver maximum benefit.

Last year, all the work we intended to deliver was done so within our budget. It included successful initiation of waste retrievals at some of Sellafield's oldest, and most hazardous facilities, an objective the NDA has been working towards since its creation. This year's good performance is described in more detail later in this report. We will vigorously seek to go on improving our performance year on year.

The 18,500-strong workforce across the NDA estate is an asset and has shown great commitment and enthusiasm to find innovative, smarter and increasingly more efficient ways of working to increase the pace of progress.

Despite our good progress, however, the Board remains concerned by the number of safety incidents reported across the estate last year. It is a disappointing increase and a priority area of focus for the Board and our new Chief Executive Officer (CEO), David Peattie.

We were greatly disappointed that a high court judgment in July 2016 found that we had acted unlawfully in the course of the competition to appoint a new parent body organisation for the Magnox sites.

Energy*Solutions* EU Ltd (now called ATK Energy EU Ltd), who brought the court action and its partner in bidding for the work, Bechtel, both had claims against the NDA. The Board judged that they were best settled out of court, to avoid the risk of prolonged and potentially more damaging litigation. We had the full support of Government in this and reached a full and final settlement of both claims in March 2017. This has drawn a line under the issue, but at a cost of around £100 million to the public purse, which we greatly regret.

Separately from the litigation, it became apparent over the course of the year that the Magnox contract awarded, at the conclusion of the competition, to the Cavendish Fluor Partnership (CFP) was at risk of legal challenge. This is because its scope and value had become materially different from that anticipated at the time of award. To avert the risk of further financial exposure to the taxpayer, the Board decided to terminate the contract, with the support of Government and CFP.

The termination will take effect in September 2019 and in the meantime we will continue to work with CFP to maintain progress on Magnox decommissioning.

The events around the Magnox competition and contract are now the subject of an independent inquiry, led by Stephen Holliday. We will cooperate with it and I believe that by taking on board its findings and lessons the NDA will emerge as a stronger and better organisation.

We have already begun a vital piece of work to consider and decide on the arrangements that will offer value for money and best enable Magnox Ltd to make rapid progress in decommissioning following CFP's departure in 2019.

Board changes
Stephen Henwood stepped down from the Board after 9 years as Chairman of the NDA. For the last 4 of those, I had the privilege of serving on the Board under his leadership. I would like to place on record my warm thanks to Stephen for his many years of service and for all he has done for the NDA.

Ken McCallum stepped down as a non-executive director at the end of the year. I would like to thank him for his valuable contribution during 3 years with us. A replacement non-executive is currently being sought.

Among executive directors, Pete Lutwyche left the NDA and the Board in October 2016, having been with us for almost 3 years. We wish him well for the future. John Clarke left the Board on 28 February 2017, on completion of his term as CEO.

John led the NDA as its CEO from 2012 having joined the organisation in 2008 and his commitment to the organisation, and the sector, has been outstanding. On behalf of my Board colleagues and the whole NDA, I would like to thank John and offer him every good wish for the future.

Chief Executive Succession
I am delighted to welcome David Peattie as the NDA's new CEO. David joined the organisation on 1 March 2017 and was crucial in helping the organisation conclude the Magnox litigation and contractual issues. He is a highly experienced leader and a strong asset for this organisation.

Thanks
I would like to close by thanking everyone involved in the NDA mission. We are overcoming challenges that once may have seemed impossible. We are not, however, complacent. Last year was a stark reminder that we are all custodians of the public purse and our stakeholders are rightly looking for excellent performance in all that we do. The NDA Board and its new leadership team are committed to nothing less.

Tom Smith
NDA Chairman

We are overcoming challenges that once may have seemed impossible

DAVID PEATTIE
Chief Executive Officer

Chief Executive's Review

2016/17 has been a pivotal year for the NDA. I joined the organisation at the end of what has been one of its most challenging years, but also one in which significant progress was made in cleaning up the UK's 17 oldest nuclear sites.

Achievements

- Removal of the entire bulk stocks of nuclear fuel from the Pile Fuel Storage Pond
- Major breakthrough in clean-up of the Magnox Swarf Storage Silo
- At Dounreay, some of the highest hazards in the estate now destroyed

£3.2billion

Spent over the course of the year in addressing the complex decommissioning tasks across the estate

Our results

I am pleased to report that we stayed within our allocated budget. This is despite the additional financial burden of around £100 million in legal and settlement costs arising from the litigation over the placing of the Magnox contract. Disciplined financial management and an ongoing commitment to more efficient working have played a large part in this success.

The total NDA spend was £3.2 billion in 2016/17. £2.2 billion came from government and £1.0 billion through commercial revenue. The cost of running the NDA itself remains below £40 million, or approximately 1.2% of the overall budget. 60% of spend was at our largest, most complex site, Sellafield in Cumbria. The NDA's decision to make Sellafield Ltd an NDA subsidiary is helping the site to focus on providing better value for money. Over £200 million in savings were generated in 2016/17. The change is also enabling work to be prioritised on clean-up rather than commercial incentives.

Whilst financial performance is important, our priority remains safety and I was disappointed to see a number of incidents in our estate last year. I am working with the sites to understand and resolve any issues to ensure the dip in our strong safety record is short-lived. We will continue to build an excellent safety culture and will not tolerate anything less.

Clean-up progress

We recently reached a major milestone in our strategy to focus on cleaning up the oldest plants at Sellafield. In March this year, the Office for Nuclear Regulation (ONR) approved the cutting of 6 access holes in the Pile Fuel Cladding Silo. This is a huge step forward in preparing to retrieve waste from one of the site's most hazardous facilities. The hugely talented Sellafield Ltd workforce, with support from the supply chain, has worked for years in preparation for this moment. This is one of the most visible signs yet of progress and is supported by the improvement in infrastructure, which has been invested in over recent years and will continue to be so.

Over the next couple of years, the primary focus at Sellafield will increasingly be clean-up and decommissioning, as the site moves nearer to the planned end of fuel reprocessing. Excellent operational performance levels at the THORP and Magnox Reprocessing plants last year mean that they are on track to close in 2018 and 2020 respectively, as set out in the NDA Strategy.

In Scotland, I am pleased to report that a 10-year programme at another priority facility in our estate, the Dounreay Fast Reactor, has concluded. Toxic sodium potassium alloy used to cool the reactor has been successfully destroyed. Alongside this, the last of the higher activity liquid, generated by reprocessing the reactor fuel, has been grouted into drums for safe long-term storage.

All these achievements contribute to the safety and security of our estate and take Dounreay further along its journey to closure. As does the successful transfer of unirradiated fuel to Sellafield and the US, a key priority for the NDA and wider government.

In terms of our 12 Magnox sites, excellent progress in delivering the NDA Strategy is being made. We are on track to complete all near-term decommissioning at Bradwell, enabling it to become the first of our sites to enter a phase of 'Care and Maintenance' (C&M) in 2019.

Only 2 Magnox plants are now left to defuel. Calder Hall at Sellafield passed the point of having 50 per cent of its fuel removed late last year, while Wylfa in Wales successfully overcame some mechanical issues before progressing. By 2019, defueling will be completed at both sites.

Outside of the core mission, the opening of Nucleus, near Dounreay, reaped the result of many years of planning to develop a single secure location for our historical records. Tens of thousands of plans, photographs and other materials from across our sites will eventually be housed in this facility. Not only has our strategy for developing Nucleus created a secure home for our archives, it is also bringing economic benefit for the Caithness community in northern Scotland.

Changes in leadership

The NDA Executive team welcomed Duncan Thompson as Sellafield Programme Director. Duncan has been with the organisation since 2006 and played a pivotal role in leading the NDA subsidiary arrangements for Sellafield. Meanwhile, the NDA said goodbye to Pete Lutwyche, NDA Chief Operating Officer. I would like to thank him for his significant contribution to the organisation and mission.

Privilege

On a personal note, it is a real privilege to have been asked to lead the NDA mission. Cleaning up and ensuring the safety and security of the UK's legacy nuclear sites is recognised as one of the most important environmental clean-up jobs in the world. This may be my first nuclear role, but I bring 30 years of leadership and operational expertise from the oil and gas sector including North Sea decommissioning. I am working closely with government, our businesses and communities to ensure I take this mission forward with the full support of our stakeholders.

Within the NDA, I have been impressed by the deep level of commitment to the mission and by the professionalism of staff. Looking at our organisation in detail, I have identified some key areas for action: simplifying processes, encouraging innovation, developing our talent and harnessing motivation. Simply put, I am working towards a simpler, more focused, more disciplined and standardised NDA. I also plan to improve the way we measure, report and deliver performance across the estate.

Thanks

I would like to conclude by offering my sincerest thanks to my colleagues in the NDA, our subsidiaries and Site Licence Companies (SLCs). I am also grateful to government and our supply chain and the many stakeholders and communities on whose support we depend.

This year has brought both success and challenge in equal measure. We will build on the successes and emerge from the challenges a stronger and more capable organisation - one placed to deliver its mission of efficiently and effectively, cleaning up the UK's nuclear legacy.

David Peattie
Accounting Officer and
Chief Executive Officer
11 July 2017

We reached a major milestone in our strategy to focus on cleaning up the oldest plants at Sellafield in securing regulatory approval to cut access holes in the Pile Fuel Cladding Silo.

The NDA Estate and What We Do

The NDA mission

We are dealing with one of the most complex, long-term, environmental challenges in Europe.

We are responsible for decommissioning 17 nuclear sites spread across the UK. This includes the first generation of Magnox power stations, various research and fuel facilities and our largest, most complex site, Sellafield (see page 13 for UK map of sites).

Our core objective is to decommission these sites safely, securely, cost-effectively and in a manner that protects the environment.

Our remit includes the development of an underground Geological Disposal Facility (GDF) as a permanent repository for the UK's higher activity waste.

We also have a range of supplementary responsibilities including supply chain development, research and development, skills, socio-economic support for local communities and stakeholder engagement.

Under the latest government Spending Review in 2015, we were allocated more than £11 billion of grant funding over 5 years which, together with our income projections, will enable us to continue to make broad progress across the estate.

Along with all public sector organisations, we are committed to maximising efficiencies and are taking measures to secure £1 billion of savings over this 5 year period. This will be achieved by introducing technical and programme innovations and efficiency improvements.

Operating structure

The diagram indicates the organisational structure within the estate. See page 14 for a more detailed illustration of the estate structure and the organisations covered by this Annual Report and Accounts.

How the estate operates

The NDA is a Non-Departmental Public Body sponsored by the Department for Business, Energy and Industrial Strategy (BEIS).

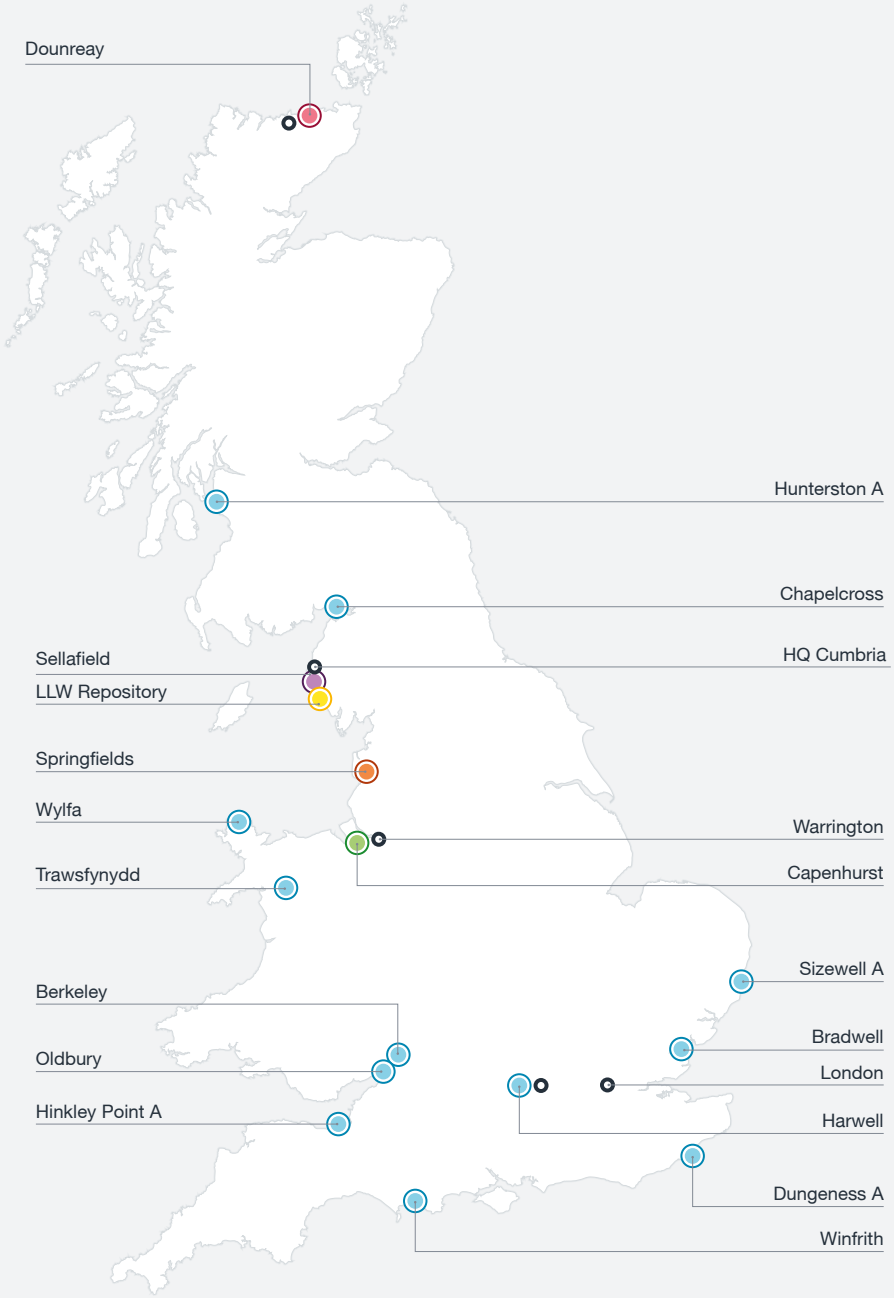
BEIS and Scottish Ministers are responsible for approving our plans and providing a policy framework for the NDA.

The NDA sets the estate-wide strategy, contract manages the operation of the SLCs and provides performance assurance across the estate to ensure value is delivered for the taxpayer.

The SLCs are responsible for delivering NDA site progress through running of day-to-day activities. The NDA also has a portfolio of subsidiaries, which operate a range of specialised services that are needed to do our work.

Activities on sites are closely regulated by the ONR, the Environment Agency (EA) Scottish Environmental Protection Agency (SEPA), Natural Resources Wales (NRW) and the Department for Transport (DfT). We seek to involve them in open dialogue and recognise their views as an important part of our strategic considerations.

The NDA estate



SLCs

- Sellafield Ltd
- Magnox Ltd
- Dounreay Site Restoration Ltd (DSRL)
- LLW Repository Ltd (LLWR)
- Springfield Fuels Ltd
- Capenhurst Nuclear Services

- NDA offices

18,500

Employees across the estate

800

Hectares of nuclear licensed land

17

Sites across the UK

7

Subsidiaries (including Sellafield Ltd)

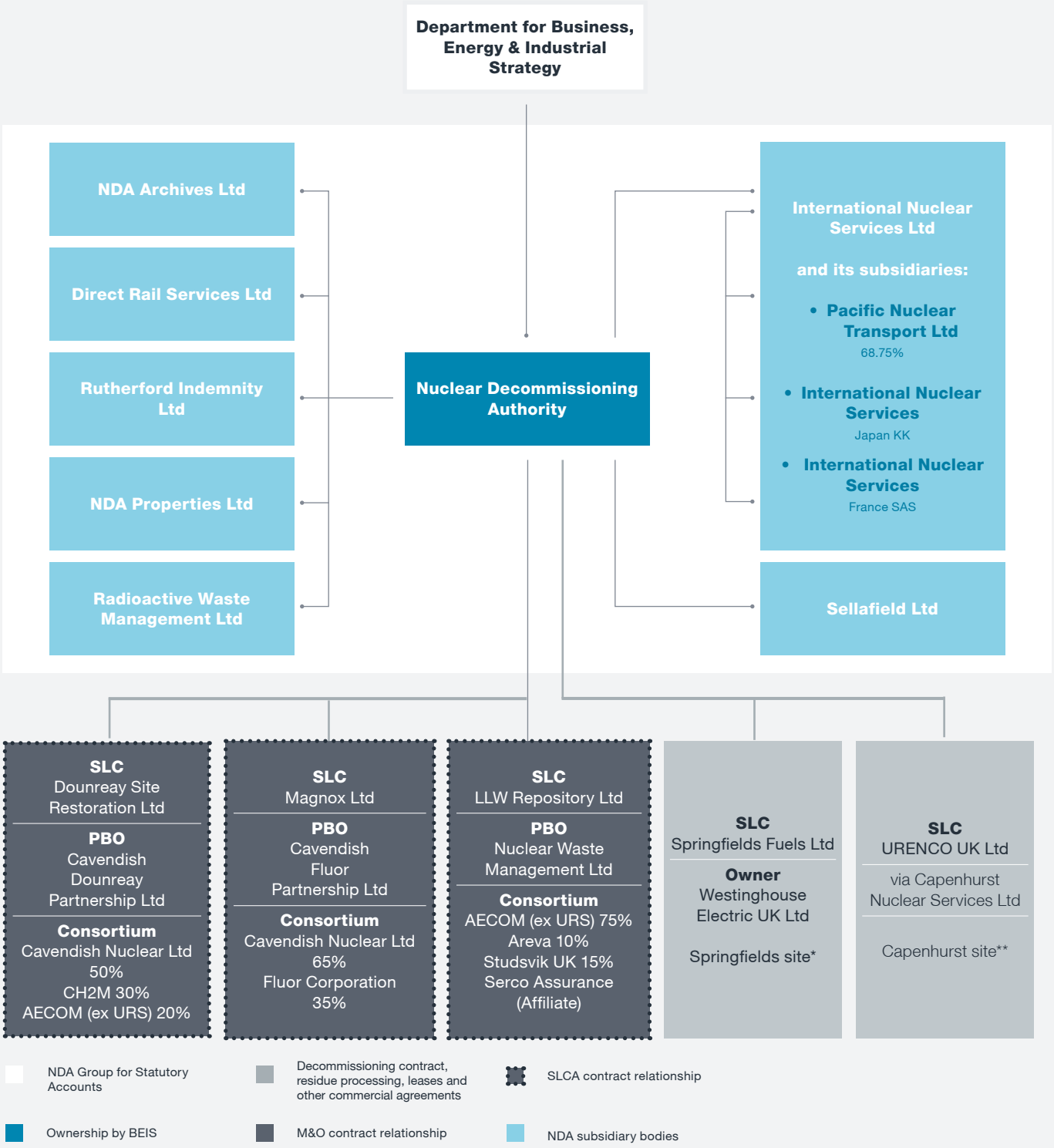
4

SLCs funded directly by the NDA

For more detail on our SLCs and subsidiaries see p14

The NDA Estate and What We Do (continued)

The NDA estate structure



* In addition to the 150-year lease for the Springfields site, NDA entered into a suite of contracts with SFL and WEC for the future management and decommissioning of the Springfields site. These include an Overarching Agreement, Sale and Purchase Agreement, Leasehold Contamination Agreement, Decommissioning Agreement, Residues Processing Agreement, Investment Agreement and Segregated Fund Deed.

** In addition to the 99-year lease for the Capenhurst site, the NDA entered into a suite of contracts with URENCO for the decommissioning, receipt, storage and management of the uranic materials for the purpose of pursuing the NDA's long-term strategy for the decommissioning and de-designation of the Capenhurst site.

Key priorities over the last financial year include:	
Work category	**Priorities**
Operations and reprocessing	– Achievement of THORP and Magnox reprocessing targets – Continued defuelling of the last 2 reactors (Calder Hall and Wylfa)
Projects and capital expenditure for new facilities required for decommissioning	- Driving progress at Sellafield's legacy ponds and silos - Pile Fuel Cladding Silo doors installed
Retrieval, movement and storage of nuclear waste and materials	– Continued transfer of a range of nuclear materials from Dounreay and Harwell to Sellafield – Exporting 45 tonnes of fuel from First Generation Magnox Storage Pond to the Fuel Handling Plant
Demolition, care and maintenance and remediation	– Progress of Bradwell to Care and Maintenance
Improvements to mission delivery	- Implementation of the new management model at Sellafield, ensuring improved performance and value for money - Working on an appropriate model for Magnox following litigation - Achievement of Small and Medium-sized Enterprise (SME) spend target 25% - The opening of Nucleus (the Caithness and Nuclear Archives) at Wick and start of records acquisition into the archive - Workforce reform of pensions working with the government and trade unions

The Year at a Glance

Bradwell

Bradwell has made major strides in its journey to be the UK's first nuclear site completing all near-term decommissioning

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50%+

Calder Hall, the world's oldest commercial-scale nuclear power station: more than half the spent fuel has now been successfully removed. It is one of only 2 Magnox sites left to complete the defueling programme.

Oldest storage silo

The first of 3 huge purpose-built specialist machines is now installed and being prepared to start removing waste from one of Sellafield's oldest, most hazardous storage silos

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Dalton Cumbrian Facility

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Cumbria's world-class £20 million research facility has put the UK at the forefront of global expertise on radiation science

Archive open

Our newly constructed £21 million nuclear archive is now open, providing a secure home for valuable records from across the estate

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88%

LLWR diverting 88% of waste away from the repository, including 3,858 tonnes of metals

2018

THORP reprocessing on track for closure date of 2018

Page 21

Research and Development

We invest more than £85 million in R&D annually, and last year jointly invested £3 million for new technologies

Sludge pumped out

For the first time, radioactive sludge is being pumped out of the world's oldest and largest open-air spent fuel pond

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The Year at at Glance (continued)

Case studies

WORK CATEGORY - RETRIEVAL, MOVEMENT AND STORAGE OF NUCLEAR WASTE AND MATERIALS

Sellafield legacy ponds

Part of the ageing 'Legacy Ponds and Silos' complex, the 2 pond facilities are among the most hazardous waste storage facilities on the site and a No 1 priority for decommissioning and clean-up.

Top right - First Generation Magnox Storage Pond
Bottom right - Working on retrievals at the Pile Fuel Storage Pond

At the **First Generation Magnox Storage Pond** (FGMSP), which dates back to the 1950s, real progress is being made on removing bulk quantities of waste after new equipment began operation 10 months ahead of schedule. The 6 metre deep pond holds spent fuel from the Magnox power stations and other miscellaneous materials.

Over time, sludge has accumulated. Consisting of corroded waste material and organic matter such as algae and wind-blown vegetation, this sludge is highly radioactive. Up to 1 metre thick in places, it must be removed with great care, leaving the water in place as a radioactive shield for the remaining contents.

About the programme:

- First sludge removals began on a small scale in 2015.
- The new Bulk Sludge Retrieval Tool was commissioned during 2016, helping to increase the rate of retrievals.
- The first skip of solid fuel was lifted out in April 2016.
- More than 50 tonnes of solid fuel have now been removed, around 10% of the total.
- Bulk fuel, sludge and miscellaneous Beta Gamma waste exports are expected to be complete by 2033, massively reducing the pond's risks and hazards.
- The retrieved contents will be treated and packaged for long-term storage.

Meanwhile, at 100 metres long, the open-air **Pile Fuel Storage Pond** (PFSP) is the world's largest and oldest spent fuel storage pond. Opened in 1952, it was built to take spent fuel from the UK nuclear weapons programme, 4 years before the FGMSP. Bulk stocks of fuel have already been removed, leaving the sludge in the pond as the biggest remaining radioactive hazard.

This year for the first time, sludge has been pumped out of the pond to a purpose-built treatment plant next door, then transferred in a 500-litre drum to the Waste Encapsulation Plant. There, the drums are grouted and processed into a storage state ready for final disposal in a UK Geological Disposal Facility. It will take several years to remove all pond sludge.

About the programme:

- It is 10 years ahead of schedule outlined in the 2010 baseline.
- De-watering of the pond is the next stage.
- This is due to start in 2019 and expected to take 10 years.

Dorothy Gradden OBE, Head of Legacy Ponds for Sellafield Ltd, said: "This is one of the first examples of a legacy facility producing waste ready for a geological disposal facility – it's a cradle-to-grave solution."

50tonnes

Solid waste lifted out since 2016

10years

PFSP project ahead of 2010 plan

Case studies

WORK CATEGORY - PROJECTS AND CAPITAL EXPENDITURE FOR NEW FACILITIES REQUIRED FOR DECOMMISSIONING

Sellafield legacy silos

The 2 silo complexes are also among Sellafield's oldest, most hazardous facilities that have been prioritised for decommissioning and clean-up.

Top right - Installing the first Silo Emptying Plant machines in MSSS
Bottom right - Installing the huge stainless steel doors at PFCS

The **Magnox Swarf Storage Silo**, (MSSS) was opened in 1964 to hold the metallic debris produced when the outer cladding was shaved off spent Magnox fuel before reprocessing. The highly radioactive debris, known as swarf, is stored under water in 22 compartments.

The first of 3 machines designed to retrieve the swarf is now in place on top of the silo, and is undergoing inactive commissioning. This was the culmination of over a year's effort, involving 100-plus separate crane lifts to install the 22 modules that make up the 360-tonne machine. The other 2 machines are now being tested off-site prior to installation. When complete the 3 machines are expected to operate for many years to remove the waste.

The **Pile Fuel Cladding Silo** (PFCS) holds fuel cladding removed from the Windscale Pile that helped to create the UK's nuclear deterrent, along with cladding from Magnox fuel. The air inside the silos was replaced by inert argon gas in 2001 to reduce the fire risk. Although non-toxic, argon cannot be breathed so all work must be carried out remotely and the atmosphere maintained during retrievals.

Two significant steps forward have been taken.

The last of 6 huge stainless steel doors, each 7 metres tall by 4 metres wide and each as heavy as 150 adults, has now been fixed in place. Holes will now be cut behind the doors, enabling remote controlled grabs to reach in, drop down and pull out the waste. These should be in place to allow the start of retrievals in 2020.

Meanwhile, engineers are using an innovative water jet to remove 6 large plates of steel while maintaining the inert atmosphere. The deflector plates, each about the size of a small car, were used to guide waste into the chambers when it was put into the silo.

Each plate has now been cut into approximately 150 pieces, using water and finely ground stone blasted at the speed of sound to prevent sparks. The pieces fall into the chambers and will be removed along with the cladding when waste retrievals begin.

Gary Snow, Head of the PFCS Programme, said: "Removing the plates inside the silo is like keyhole surgery, but on an industrial scale."

22modules

Construction involved 100 lifts, to install 22 modules comprising 13,500 different parts

150adults

Each door is as heavy as 150 adults

The Year at a Glance (continued)

Case studies

WORK CATEGORY - DEMOLITION, CARE AND MAINTENANCE AND REMEDIATION

Bradwell

Bradwell will be the first Magnox site to reach the hugely important Care and Maintenance (C&M) phase, marking the completion of all near-term decommissioning.

Top right - Bradwell in 2016
Bottom right - How it looked in 2010

During the Care and Maintenance (C&M) phase a site is left in a safe and secure state to allow time for radiation levels in reactor cores to decay naturally. Following this period, final decommissioning and site clearance can take place.

Over the last 12 months, a number of significant milestones were reached at Bradwell. These mark the culmination of complex programmes spanning at least four years and put it well on track to be the first NDA site to enter the C&M phase.

Key milestones:

- Weather-proof aluminium cladding
  The most visible sign of progress is the new cladding encasing the 2 reactor buildings, a project that began in 2012 and concluded in June 2016.
- All underground waste vaults on the site have now been emptied – a first for a Magnox site.
  This means an area equivalent to 5 tennis courts is decontaminated and can now be covered ready for the C&M phase.
- Pond decontamination
  At the pond complex, the walls, floor and ceiling have been decontaminated over a 4 year period - equivalent in size to the area of a rugby pitch.
- Metallic Fuel Element Debris (FED)
  the introduction of innovative techniques has meant that this Intermediate Level Waste (ILW) is either being dissolved in a specially designed plant that dramatically reduces its volume prior to packaging for disposal or being treated and size reduced before disposal at Low Level Waste Repository (LLWR) - good cross-estate co-operation making this possible.
- Removing redundant equipment and decontamination work.
  More than 2.5km of pipework and 120-plus tonnes of metal waste were removed.
- Planning permission
  has also been granted that will enable ILW from Dungeness A and Sizewell A to be brought for storage at Bradwell's purpose-built Interim Storage Facility (ISF). This supports the NDA's strategy of consolidating waste at fewer regional stores rather than individual sites, reducing costs and simplifying ongoing monitoring processes required during C&M.

2019

By 2019, only the 2 reactor buildings, the weather-proofed pond structures and ILW store will remain

10years

The remaining Magnox sites will all reach the Care and Maintenance stage in the next 10 years.

Case studies

WORK CATEGORY - IMPROVEMENTS TO MISSION DELIVERY

Research and development

The NDA invests more than £85 million a year in R&D across the estate. The bulk of this is focused on addressing challenges encountered during decommissioning work on sites. Around £7 million is spent directly by the NDA, in particular on innovation that can be applied across numerous sites.

Top right - LaserSnake2
Bottom right - Testing LaserSnake2 at Sellafield

Direct spending allows for more innovative ideas, and to support early development through to market-readiness.

Following a number of joint funding initiatives with Innovate UK, the government's innovation agency, which targeted the wider nuclear sector, the NDA has taken the lead in running a £3 million competition to demonstrate new technologies for decommissioning hazardous nuclear processing cells found across our estate, particularly at Sellafield. The cells are part of the THORP and Magnox reprocessing plants which are due to close in 2018 and 2020 respectively and contain thousands of assorted items that may be radiologically contaminated.

The goal is to combine technologies – such as robotics, other autonomous systems, sensors and detectors, imaging and virtual reality - into an integrated system. Together, these will establish what is in the cells, how its contents should be accessed, cleaned, cut up, sorted and packaged.

An illustration of the integrated approach is the development of the LaserSnake robotic equipment. In 2008, the NDA allocated £1 million to demonstrate the effectiveness of lasers, widely used by non-nuclear industries, for cutting up metal and removing contaminated concrete surfaces.

The process proved very successful leaving little waste, ideal for situations too hazardous or inaccessible for people.

Collaboration with a small robotics business then led to the first LaserSnake project, where a laser cutting head was attached to a snake-like robot arm and demonstrated in a non-active environment. Subsequent funding from a joint Innovate UK, NDA and BEIS initiative funded an extended SME-led consortium to develop LaserSnake2, a larger, more accurate snake robot, with lightweight cutting heads and the capability to cut thicker sections.

This design reduces the impact of radiation by ensuring sensitive electronic components stay outside radioactive areas.

Tested in a cell at Sellafield and controlled remotely, LaserSnake2 successfully cut up a double-walled stainless steel vessel with a 32mm thick inner shell. The trial confirmed its reliability in a radioactive environment.

Benefits of laser cutting:

- Fast and efficient
- Safer and cheaper than conventional approaches
- Produces less secondary waste.

Conventional processes depended on workers in air-fed suits manually cutting up vessels with heavy-duty sawing equipment, restricted to working for a few hours at a time.

Sellafield has thousands of items that must be cut up for removal before buildings can be decommissioned. Other sites, both in the UK and overseas, could also benefit, while aerospace and defence industries have already realised LaserSnake2's potential.

LaserSnake2 can be customised for a range of conditions and is ready for commercial deployment. Its journey took 4 years and many steps, including collaboration between developers on investment, collaboration with Sellafield Ltd and ongoing support from sponsors NDA, Innovate UK and BEIS.

The Year at a Glance (continued)

Case studies

WORK CATEGORY - IMPROVEMENTS TO MISSION DELIVERY

Dalton Cumbrian Facility

The need for world-leading expertise was identified during the NDA's early days. Faced with an overwhelming need to get to grips with a legacy of redundant test reactors, historic research centres and a fleet of elderly power stations – as well as Sellafield's innumerable complexities – the huge gaps in decommissioning knowledge were clear.

Top right - The Dalton Cumbrian Facility
Bottom right - Inside one of the DCF labs

A £20 million collaboration agreement between the NDA and The University of Manchester, home to the pioneering Dalton Nuclear Institute, led to the development of the Dalton Cumbrian Facility (DCF), close to the heart of the UK's most hazardous, complex decommissioning problems at Sellafield.

Opened in 2011, the goal was to build a research centre covering 2 crucial scientific disciplines that would support the NDA's mission and add to the body of knowledge for future decommissioning programmes both in the UK and elsewhere. The agreement concluded in October 2016.

Radiation science focuses on understanding exactly how materials and chemical systems are affected by radiation. This is vital to decommissioning and radioactive waste management, allowing the behaviour of packaged waste to be predicted over future decades.

The DCF boasts unique features that are unrivalled in the UK and among the best worldwide. These include 2 particle accelerators, allowing a single sample to be subjected to 2 forms of radiation at once. This is being developed into the world's highest-energy dual-beam particle accelerator system. A self-shielded gamma irradiator which can supply a dose rate equivalent to spent fuel, plus a suite of extensive analytical laboratories complete this bespoke setup.

These enable replication, in laboratory-controlled conditions, of the damage caused to materials by ionising radiation. This way, understanding of how the damage occurs can be developed at an early stage and future behaviour modelled in great detail.

DCF's work has reinvigorated the UK's research base in this field, pushing the UK right to the forefront of global expertise.

Nuclear engineering decommissioning focuses on developing new technologies, particularly robotics, to characterise and decommission facilities. This includes characterising radiation fields and assessing fault tolerance of robotic components to ionising radiation. Technology developed at DCF will imminently be deployed on Sellafield site.

Covering both areas is a team of 7 core research staff based at the DCF, plus 6 post-doctoral research associates, while 21 PhD projects have been completed and more than 100 papers published.

Links with the commercial nuclear sector are now substantial. Industry has funded a number of PhD studies covering a range of projects associated with specific problems experienced at site level.

In partnership with the National Nuclear Laboratory, DCF hosted Cumbria's innovation-driving business support organisation Innovus. This partnership, with funding support from the NDA and the government's Regional Growth Fund, helped to grow the innovative ideas of many small Cumbrian businesses into commercial products.

Funding from the Research Councils enabled DCF to become a founding member of the National Nuclear User Facility and it has recently become part of the UK National Ion Beam Centre, enabling academics from across the UK to access its facilities.

Overall, the future is bright, with DCF continuing to attract new research funding from the NDA estate, the UK nuclear industry and the research councils. It has become a key component in delivering the UK's Nuclear Industrial Strategy published in 2013.

Case studies

WORK CATEGORY - IMPROVEMENTS TO MISSION DELIVERY

Nucleus

The NDA's nuclear archive, Nucleus, in Wick is now open for business, providing a home for important nuclear records from across the estate.

Located near Dounreay, the £21 million investment has a dual role. As well as nuclear records, Nucleus will house a collection of local Caithness records that has outgrown its existing home.

Top right - The NDA's nuclear archive, Nucleus
Bottom right - Inside one of the study areas

An exercise lasting at least five years is now under way to move thousands of plans, photographs, drawings and other records from diverse locations.

Sellafield Ltd alone has more than 80,000 boxes of archived records in off-site storage, plus material on site and in various offices. The 12 Magnox Ltd sites have a similar-sized collection in storage, while the number of electronic records across the estate is believed to number hundreds of millions.

Dounreay's records – including over 300,000 photographs and an estimated 200 tonnes of documents – were among the first nuclear archives to start arriving, with the full estate-wide collection due for transfer over the coming years. Secure pods will hold the records, which will be catalogued, indexed and preserved. Old decaying documents will be transferred to archive-quality paper and digitised. Humidity and temperature will be carefully controlled to minimise the potential for deterioration.

Nucleus employs approximately 20 people including archivists, preservation experts and support staff.

The archive will play an important role for public and academic research. It will also feature in the development of a future geological disposal facility (GDF), acting as a central repository for detailed waste records that must be safeguarded for many generations.

Discussions are under way with the Ministry of Defence, new build developers and operators of the UK's current nuclear power stations, as well as other key stakeholders with Land Quality records-related requirements, to potentially consolidate their records at Nucleus.

Nucleus is part of a wider Information Governance Programme (IGP) across the estate, our subsidiaries and other nuclear organisations. Under IGP, we are developing projects to safeguard sensitive material, retain records and share knowledge to support decommissioning activities. We are also ensuring access and agreeing systems for managing the information in both digital and hard-copy formats and, where possible and once developed, proactively accessible via cloud technologies and/or websites – while keeping it useable – well into the future.

80,000

Sellafield Ltd alone has more than 80,000 boxes of archived records in off-site storage

26km

Secure pods containing up to 26 km of shelving will ensure the records are catalogued, indexed and preserved

Financial Overview

Headlines

- A total of £3.243 billion spent in the year
- £1.025 billion income
- Meaning a net total of £2.218 billion funded by the government
- Movements in provisions and other balance sheet items totalled £2.870 billion
- Equals net comprehensive expenditure of £5.088 billion

£38million

NDA's own running costs are 1.2% of overall estate budget

The NDA has again managed expenditure within the strict funding boundaries agreed by Parliament, and in line with the Spending Review totals agreed in 2015. Over the year, we have spent £3.2 billion, making strong progress across the estate.

Importantly, through careful prioritisation of expenditure and by deferral of a limited amount of scope, we have been able to manage the unforeseen additional costs of the Magnox litigation settlement. We have secured over £1 billion of commercial income through the year, reducing the net impact on the public purse to £2 billion.

It is important to review this performance in context – it is essentially a snapshot of 1 year in a 100+ year programme of activity. The complexity of the critical projects at Sellafield, which are often at a relatively early stage in both design and delivery, mean that there is inherent uncertainty in both the cost and schedule for the necessary work.

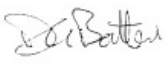
There is more stability in the cost estimates across the Magnox sites and at Dounreay. Nevertheless there has been an overall increase of £1.6 billion in the undiscounted cost of completing the NDA mission. Details behind the key numbers are shown on pages 28 to 29.

The way in which we contract for delivery of work has changed significantly this year, with Sellafield becoming a subsidiary of the NDA from April 2016. Consequently there has been a substantial reduction this year in fees paid to Parent Body Organisations (PBOs).

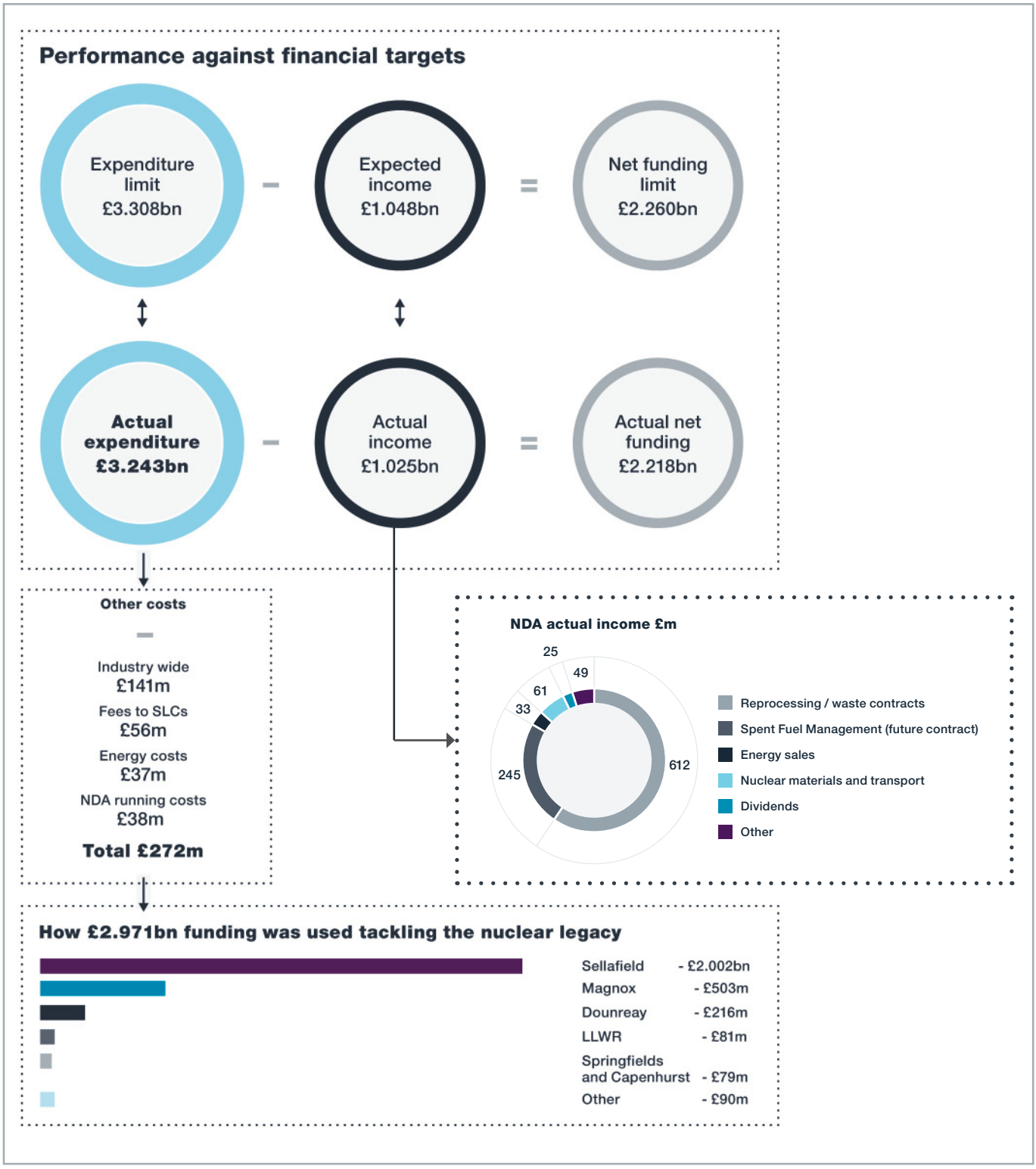
All expenditure has been focused on improvements in the operation of the site resulting from the change. Work is under way to procure specialist support to help the management of the site in delivery of key programme and projects.

We continue to drive value for money in our own expenditure, with the cost of running the NDA itself remaining below £40 million (or 1.2% of the overall NDA budget) and continued investment in research and socio-economic initiatives.

The spending review settlement required a commitment from the NDA to deliver efficiency savings of £1 billion, and it is pleasing to say that good progress is being made towards achievement of that target.



David Batters
Chief Financial Officer and
Estate Programme Director
11 July 2017



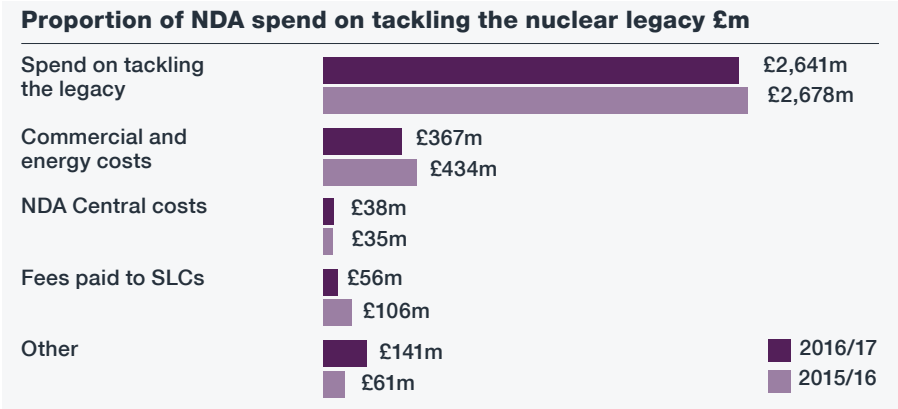
Note the figures in the above, and following, graphs are prepared on the basis of government financial reporting, which differs in part from the basis used to prepare the financial statements.

Financial Overview (continued)

Financial Summary 2016/17

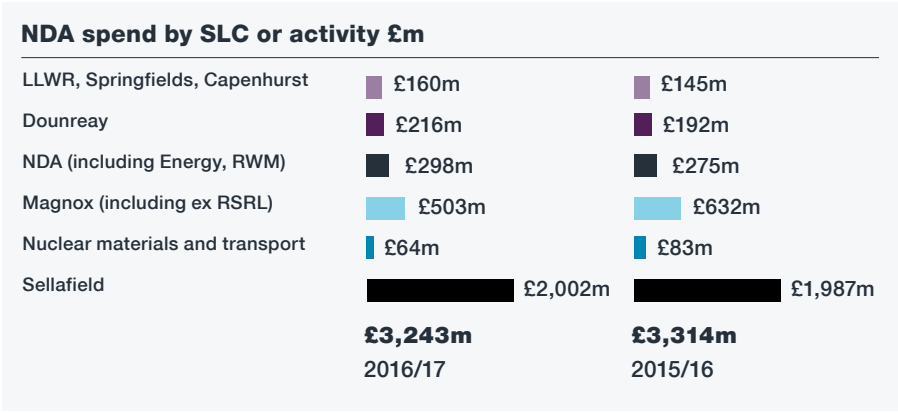
NDA spend on tackling the legacy

The bulk of NDA's budget is directed towards tackling the nuclear legacy, by funding the decommissioning carried out by SLCs. The remainder funds commercial operations, industry-wide costs, fees to SLCs and the NDA's own running costs.



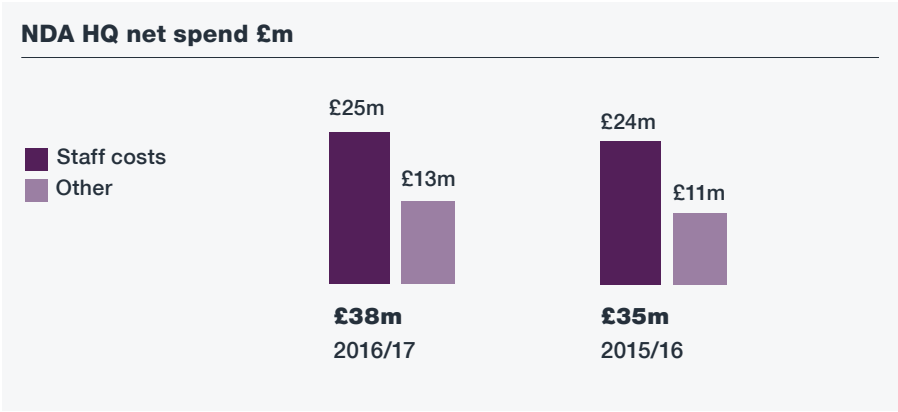
NDA spend by SLC

Spend in 2016/17 was £3.2 billion. More than 60% of this was spent at Sellafield, reflecting the priority given to the site. Expenditure at Sellafield has increased during NDA's existence and now stands at £2 billion per year.



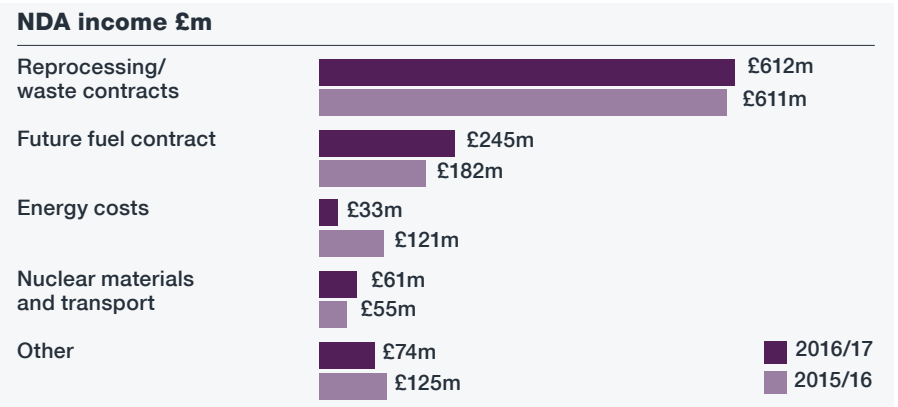
NDA HQ spend

NDA's own running costs remain below £40 million per year, or approximately 1.2% of overall expenditure.



NDA's income

NDA recognised income of over £1 billion in the year, with 85% arising from reprocessing and management of spent fuels and waste.

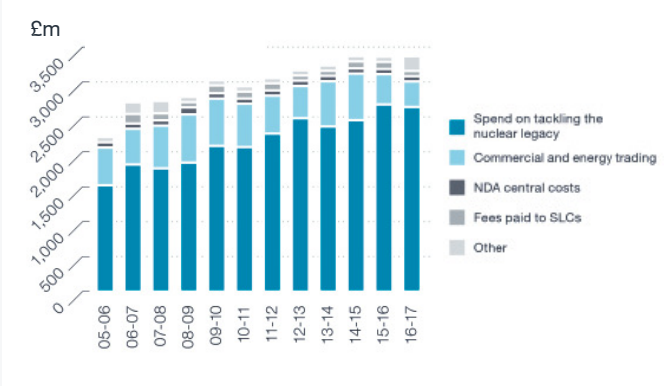


Financial Summary - since 2005

NDA spend on tackling the legacy

The proportion of NDA expenditure tackling the nuclear legacy has increased since 2005, with a corresponding reduction in commercial costs as commercial operations wind down.

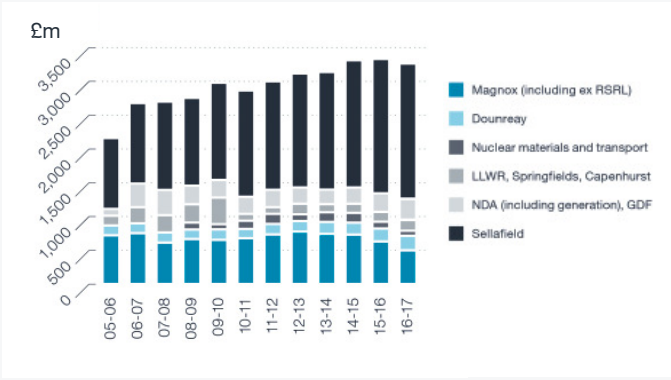
Proportion of NDA spend on tackling the nuclear legacy since 2005



NDA spend by SLC

Sellafield has always been the NDA's largest area of spend, and has been increasingly prioritised in recent years as funding has been directed towards the estate's highest hazards.

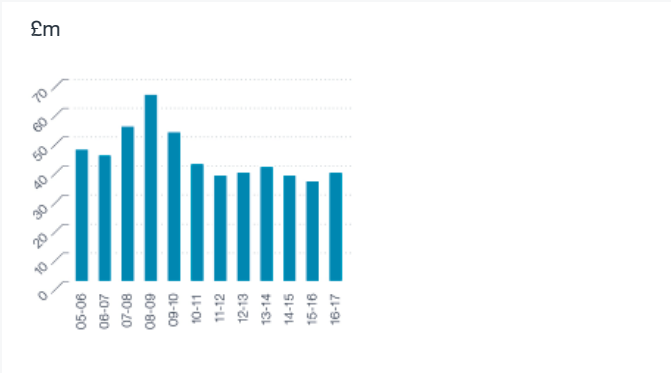
NDA spend by SLC or activity since 2005



NDA HQ spend

After the early years in establishing the NDA's structure and programme, annual running costs have stabilised at below £40 million per year.

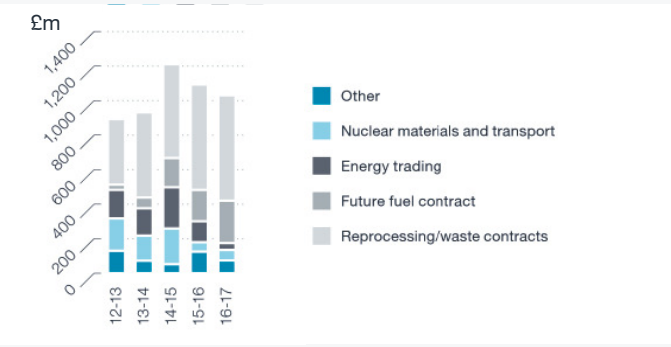
NDA HQ net spend since 2005



NDA's income

In recent years electricity generation income has reduced, leaving reprocessing and management of spent fuels and waste as the dominant source of income.

NDA income since 2012



Financial Overview (continued)

Nuclear Provision

The Nuclear Provision is a single point number in the Statement of Financial Position which represents the discounted estimated cost of the decommissioning mission.

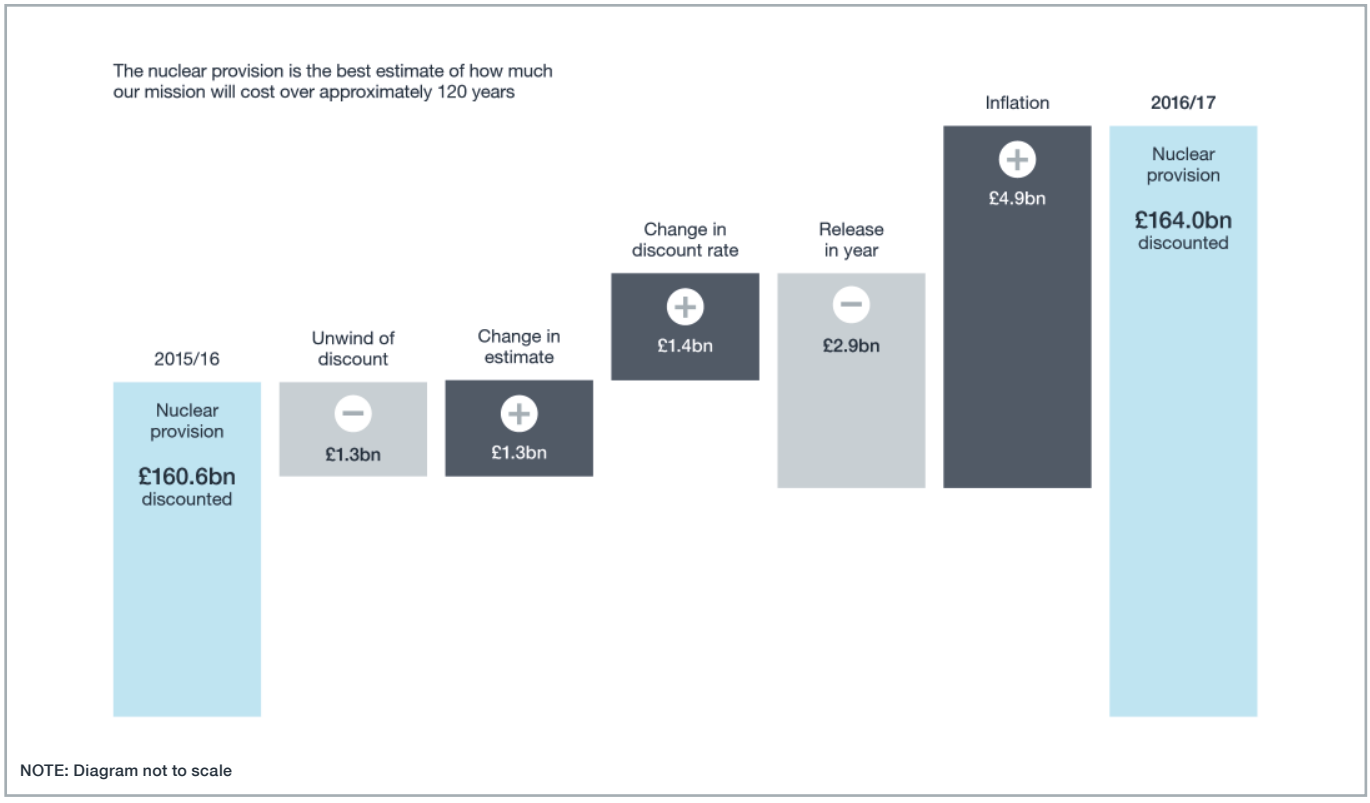
The NDA management's best estimate of the future costs of the estate is based on an assumed inventory of materials, using strategies for retrieval and disposal over several decades. Each of these elements (quantity, method and time to treat) is uncertain in their own right, as is the cost of developing the necessary technology and plans to deal with these activities. The quality of the forecast becomes less certain as time goes out, and acceptable standards of clean-up and end states may change.

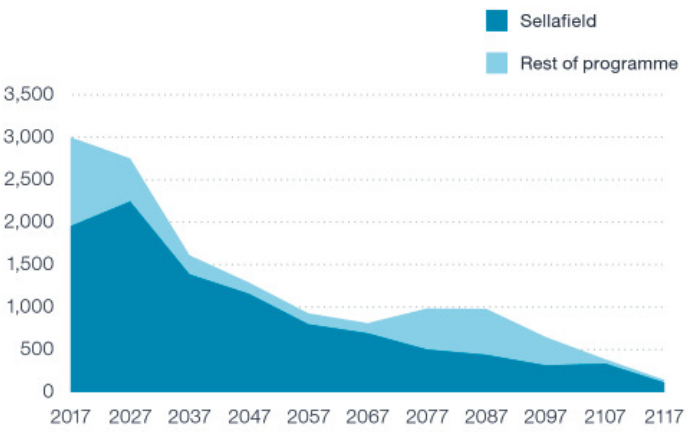
It is important to understand the basis of this estimate and the inherent uncertainty around it, and therefore that it is simply a single point in a credible range of potential outcomes. For more detail see Appendix A on page 120).

Changes in 2016/17 estimate - Authority
The discounted nuclear provision at the end of 2015/16 was **£160.6 billion.** Since then the movements have been:

- The value provided for 2016/17 released from the provision -**£2.9 billion**
- Increases from inflation **+ £4.9 billion**
- Unwinding of the existing discount applied to the provision every year **- £1.3 billion**
- The impact of the changes in discount rates **+ £1.4 billion**
- Cost estimate changes which increase the liability estimate by a net **+ £1.3 billion.**

These movements bring the 2016/17 Authority estimate to **£164.0 billion** discounted.





Total expenditure profile (£m, undiscounted)

The graph above shows the undiscounted expenditure profile for future years (excluding NDA administrative and other non-programme costs, and some commercial costs) from lifetime 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 10 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.

		Movements in provision - discounted							
	2015/16 discounted £m	Unwind of discount £m	Discount rate change £m	Released in year £m	Inflation £m	Other cost change £m	Movement discounted £m	2016/17 discounted £m	2016/17 undiscounted £m
Magnox Limited	(23,329)	193	(170)	659	(707)	(374)	(399)	(23,728)	(15,150)
Sellafield Limited	(117,421)	924	(1,075)	1,940	(3,582)	(716)	(2,509)	(119,930)	(89,627)
Dounreay Site Restoration Limited	(2,713)	21	(101)	177	(81)	0	16	(2,697)	(2,378)
LLW Repository Limited	(755)	6	(6)	19	(23)	0	(4)	(759)	(576)
INS Contracts	(20)	0	(1)	0	(1)	(30)	(32)	(52)	(43)
Springfields	(901)	8	(6)	45	(27)	0	20	(881)	(595)
Capenhurst	(1,190)	10	(18)	34	(37)	0	(11)	(1,201)	(968)
Geological Disposal Facility	(14,264)	111	(64)	28	(438)	(123)	(486)	(14,750)	(9,655)
Authority	(160,593)	1,273	(1,441)	2,902	(4,896)	(1,243)	(3,405)	(163,998)	(118,992)
NDA group companies	(79)	0	(4)	0	(3)	(61)	(68)	(147)	(131)
Group provision adjustment	0					640	640	640	640
NDA Group	(160,672)	1,273	(1,445)	2,902	(4,899)	(664)	(2,833)	(163,505)	(118,483)

Health, Safety, Security, Safeguards and Environment Report

Introduction

The safety of people, protection of the environment and security of nuclear materials and information are NDA's overriding priorities and dictate our approach to all activities across the estate.

We expect good performance in environment, health, safety and security that reflects both international standards and policies, and relevant good practice from UK industry.

Serious accidents are rare. The number of injuries under RIDDOR is well below the UK national average for organisations of a similar size, but there was an increase in the number of near misses and first aid cases that fall below the reporting threshold.

We were disappointed to see a number of INES events at our sites which indicates a reduction in the multiple safety layers that provide defence in depth.

While legal responsibilities rest with the SLCs, subsidiaries and contractors who work on the estate, it is NDA's duty to develop a strategy and programmes that have particular regard for safety, the environment and security and we take our responsibilities seriously. We hold to account those who fail to meet our expectations and are working with the sites to ensure the dip in our strong safety record is short-lived.

Environmental performance on the NDA estate

The NDA measures environmental performance as the number of non-compliances with environmental permits. In 2016/17, the estate reported 60 non-compliances, slightly fewer than last year. Most were technical breaches, and none resulted in a significant environmental impact.

- In a year of good performance, Sellafield reacted well to an event which saw a steady increase in radioactive discharges via one of the surface water sewers. The increase was very small and within permitted limits. Control of chemicals remains a challenge for the site and, at the request of the Environment Agency, Sellafield has reviewed its management arrangements, and implemented an improvement programme. We are encouraged by Sellafield's response and we will monitor their progress.

- Dounreay's environmental performance has improved. However, the Scottish Environment Protection Agency (SEPA) provided a 2016 end-of-year 'at risk' rating for the management of radioactive waste, and a 'poor' rating for management of the low level waste vaults. While we, and DSRL, were disappointed with this outcome, there are signs of recovery. It is for DSRL to embed the better practices expected by NDA and SEPA. We have an open dialogue with DSRL and we will monitor their progress.

- Performance at Magnox improved. The focus on characterisation, sentencing, reporting and consignment of wastes has raised standards, but towards the end of the year, there were a small number of events concerning the despatch of wastes from sites. These resulted in a warning letter from the Environment Agency. None of these events were harmful to the environment, and Magnox learned from this experience. More positively, Magnox completed its environmental improvement programme for 2016/17, which included the removal of 50% of the legacy waste at 10 sites.

- Elsewhere in the estate, we were pleased to note good environmental performance at LLW Repository, and in our subsidiaries NDA Properties Ltd, International Nuclear Services/Pacific Nuclear Transport Ltd, Radioactive Waste Management and Direct Rail Services Ltd.

The NDA recognises that measuring site performance is wider than the number of environmental non-compliances against permits. So we are collaborating with the Environment Agency and our SLCs to develop a broader set of indicators for environmental performance, which we will use for our report next year.

Nuclear and conventional safety performance on the NDA estate

We use a suite of metrics, targets and performance indicators to understand safety performance. We also visit sites to carry out safety audits and discuss safety with managers, workers and trade union representatives. The results are reported to the NDA Executive and NDA Safety and Security Committee, which is a sub-committee of the NDA Board, and the findings are raised with SLC management and Parent Body Organisations.

One issue of concern in 2016/17 was the reporting by Sellafield of 3 radiological events rated at INES2, the estate's first at that level since 2009.

INES is the International Nuclear and Radiological Event Scale set by the International Atomic Energy Agency, with scales ranging from 1-7. INES is primarily intended to aid understanding between the technical community, the media and the public on radiological events. A 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 total, our sites reported 9 INES events, 6 at Level 1 (Anomaly), which is the lowest level and 3 at Level 2 (Incident).

The NDA takes the safety of people working with radiation seriously and we have, working with the SLCs concerned, reviewed all 9 INES events. It is the SLCs' duty to report and investigate events on the site, to take action to control risks, and prevent recurrence. We were content that SLCs had carried out a proper investigation, and learned from what had happened.

We also monitor nuclear and radiological events that do not attract INES ratings. The rate of occurrence of these events was similar to those of previous years. On conventional safety, all parts of the estate saw an increase in the number and severity of events that could have resulted in serious injury.

Number of INES events by SLC

	Magnox	DSRL	LLWR	Sellafield	Total
2015/16	3	1	0	2	6
2016/17	1	2	0	6	9

Note - more detail of these events can be found in Appendix B on page 122.

Sellafield

On conventional safety, the good performance of recent years continued and the site ended 2016/17 with a Recordable Incident Rate of 0.29, a creditable achievement comparable to high-performing public and private sector organisations of similar size.

However, towards the end of the year, 3 radiological safety events were assigned INES2 ('Incident') ratings.

None of the events had any impact on public safety, or on the safety of operations at the site, and it is unlikely that the health of people involved will be affected. Sellafield and NDA are equally committed to learning from what has happened. We have reviewed Sellafield's response to the INES2 events, and do not consider that they indicate a serious decline in safety performance.

Dounreay

There was a deterioration in safety performance at Dounreay, and DSRL and NDA concluded that improvements introduced following the 2014 sodium tank farm fire have not been sustained. The site is receiving attention and assistance from its parent body. More positively, from December 2016, the site reported fewer injuries and events.

Magnox

This year, we were pleased to note sustained improvement to overcome a dip in performance in the previous year at all Magnox sites. Our own assurance work has confirmed the presence of good safety management, and an appropriate safety culture.

In common with many large industrial structures of a similar age, all Magnox sites have historical issues with the management of asbestos, which will become clearer as decommissioning progresses. In January 2017, the ONR served an Improvement Notice on the Wylfa site, requiring improvements in the management of asbestos.

NDA has continued to engage with Magnox to improve the management of asbestos, and progress has been made. The scale and nature of this issue means that further work is required to reduce the risk and control the hazard.

Low Level Waste Repository

LLWR has maintained its safety performance through initiatives such as the 'Perfect Day' principle, which combines safety with work delivery and management effectiveness. As LLWR makes proportionately greater use of contract labour than other NDA sites, the management of contractors is an important part of their approach to safety.

We will repeat the estate-wide Safety Climate Survey during 2017/18 and use the results to inform our approach to the assurance of safety, and the development of our strategy on the environment, health and safety.

Health, Safety, Security Safeguards and Environment Report (continued)

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

In 2016/17, a total of 20 Specified Injuries and Lost Time Accidents (LTA) were reported to the regulators, under RIDDOR.

Slips, trips, falls and strains still cause the majority of lost-time accidents. Injuries that are more serious remain rare.

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 2016/17 was 81 per 100,000 employees compared to 118 per 100,000 employees the previous year. For comparison, HSE's most recently published data (from 2015/16) indicates a UK rate of 274.

Safety injuries by SLC	2016/17 RIDDOR specified injuries	(> 7 day LTA)	Total	2015/16 RIDDOR specified injuries	(> 7 day LTA)	Total
Magnox	2	3	5	5	4	9
DSRL	0	0	0	1	3	4
LLWR	0	0	0	0	0	0
Sellafield	3	12	15	7	8	15
Total	5	15	20	13	15	28

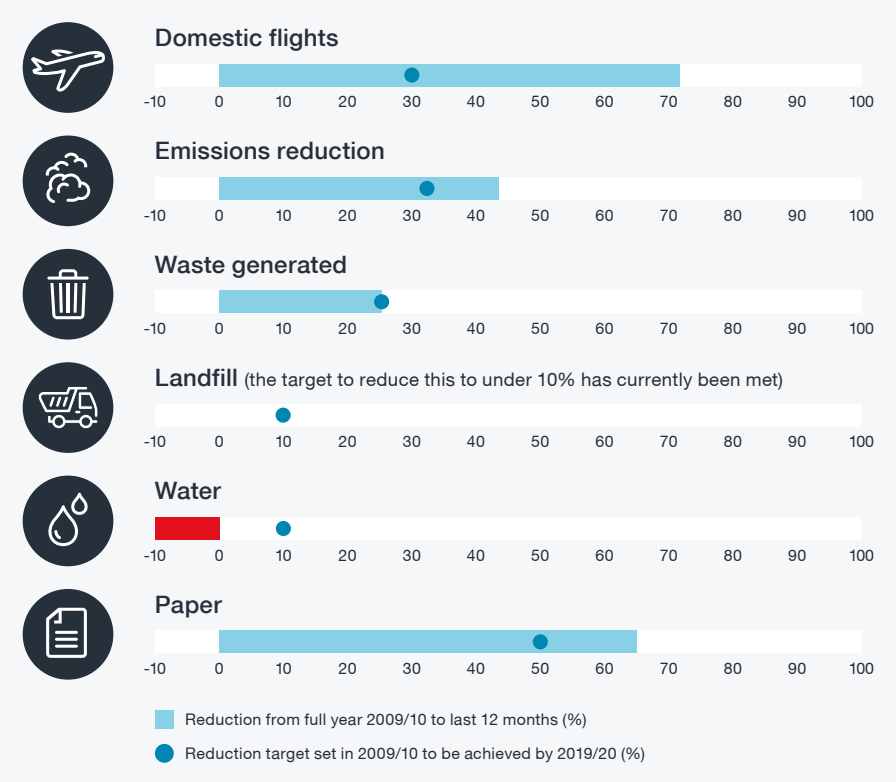
Security Performance- Site Licence Companies (SLCs)

Security Focus

Ensuring appropriate security performance and meeting UK strategic goals is as important as achieving good safety performance. This year, working with other stakeholders including BEIS and regulators, our focus has been to reduce risk in cyber security and the supply chain, improve resilience and open the NDA archive building at Wick, Nucleus, which will store sensitive nuclear information. Specifically, we have:

- Provided cyber security specialist support to the new NDA Cyber Resilience Programme
- Maintained achievement of the required government targets for assessing information risk management
- Engaged with BEIS, ONR, NDA subsidiaries and SLCs to identify supply chain risks across the estate
- Initiated a pan-nuclear sector working group to develop options for a single supply chain assurance solution
- Engaged with power generators to broaden consultation on supply chain risks and develop options for a single supplier assurance solution
- Worked closely with Cumbria Local Resilience Executive Board to identify new options following a decision to stop current plans to build a dedicated Strategic Control Centre
- Worked closely with Cumbria Local Resilience Programme Board to plan resilience exercises
- Worked with Sellafield Ltd to define requirements for their Off-Site Command Facility
- Worked closely with NDA Archives Ltd to commission security equipment and implement security plans (physical, cyber, personnel and procedural) for the archive and achieve regulator accreditation for the storage and handling of Sensitive Nuclear Information
- Engaged with BEIS, ONR and participants from across the civil nuclear sector to review how sensitive nuclear information is defined and marked

There has been a mixed performance across the SLCs during 2016/17. The NDA Security Team has maintained direct involvement with each SLC, including site visits and regular monthly interactions with the Security Directors.



Safety and environmental performance in the NDA

As the employer of some 238 people across multiple locations, we have responsibilities for the safety and well-being of our staff, the security of information we use, and our own impact on the environment.

NDA's in-house safety performance has been good, with only minor accidents recorded during the year, and a small number of first aid cases.

See Something, Say Something, the NDA's event reporting process, was introduced in 2015 and has bedded in well. Trends and types of event are presented quarterly to safety representatives and the NDA Executive Committee. This information has been used to develop safety, health and environmental improvements, and during this year we ran successful campaigns in personal wellbeing, fitness, road safety, workplace stress and office safety.

The Government has set environmental and sustainability targets that must be met by 2019/20. NDA reports as an NDPB, and our progress is shown above.

We expect to meet the 2019/20 targets for domestic flights, emissions and waste.

While we are already ahead of the target for paper use, we noted an increase during this year and we have introduced a number of measures in response, including better use of technology as a replacement for paper documents.

We are pleased to report that none of our waste now goes to landfill. Reducing our water use however, is more challenging as we have moved a number of people into our HQ at Cumbria.

Accountability

Directors' Report

The Nuclear Decommissioning Authority is an Executive Non-Departmental Public Body (NDPB), established on 22 July 2004 under the Energy Act (2004) 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.

Directors comprise of senior management and non-executives whose details are set out in the Governance Statement on page 39.

Auditor of the NDA
The NDA is audited by the Comptroller and Auditor General (C&AG) in accordance with the Energy Act 2004. 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.

Pensions
All NDA employees are eligible to participate in the Civil Service Pension Arrangements. Employees within the Group participate in various defined benefit pension schemes detailed in note 26 to the accounts.

Group employees also participate in various schemes which are accounted for on a defined contribution basis, with details given in note 26 to the accounts.

Charitable and political donations
The NDA did not make any charitable or political donations during the year (2015/16 - £Nil).

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 92.84% success rate for payment of suppliers in accordance with terms (2015/16 – 94.94%). The average number of payment days from invoice date was 29 days and for a valid invoice, (i.e. one with all details correct and entered on the accounting system), 12 days (2015/16 - 28 days and 10 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 18.40 days (2015/16 – 12.71 days).

Personal data
There has been a loss of personal data reported to NDA during the year. A supplier, on contract to NDA between 2007 and 2009 to provide dosimetry services, discovered that a server being managed by a sub-contractor and containing Personally Identifiable Information (PII) had been infected with malware and that a copy of certain data had been exported. A small number of NDA staff (current and former) were affected and an exercise to contact them all to inform them of the data breach has now been completed. A subsequent investigation has concluded that the sub-contractor should not have retained NDA staff PII following termination of the contract and confirmed that the compromised data has now been expunged from their IT systems.

Other Disclosures
Some disclosures that are required in the Director's Report have been included elsewhere in the Annual Report. Disclosures on Equal Opportunities, Learning and Development and how the NDA engages with all staff are in the Staff Report on page 52. Details of investment in socio-economic developments, research and development and funding, counterparty and foreign exchange risk are all included in the financial statements. The NDA's environmental performance is detailed in the HSSSE report on page 33.

No events affecting these accounts have occurred since the reporting date. A full explanation of the adoption of a going concern basis appears in note 2.1 of the financial statements.

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 taxpayers' equity and cash flows for the financial year.

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

- Observe the Accounts Direction issued by the Secretary of State (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 for Business, Energy and Industrial Strategy (BEIS) 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 safeguarding the NDA's assets, are set out in Managing Public Money published by HM Treasury.

In addition, the Accounting Officer confirms that, as far as he is aware, there is no relevant audit information of which the NDA's auditors are unaware, and that he has taken all steps necessary to ensure that he is aware of any relevant audit information, and that the NDA's auditors are aware of that information.

He takes responsibility for ensuring that the NDA Annual Report and Accounts as a whole is fair, balanced and understandable in both the preparation of the document and in making the judgements necessary in preparation of the document.

Governance Statement

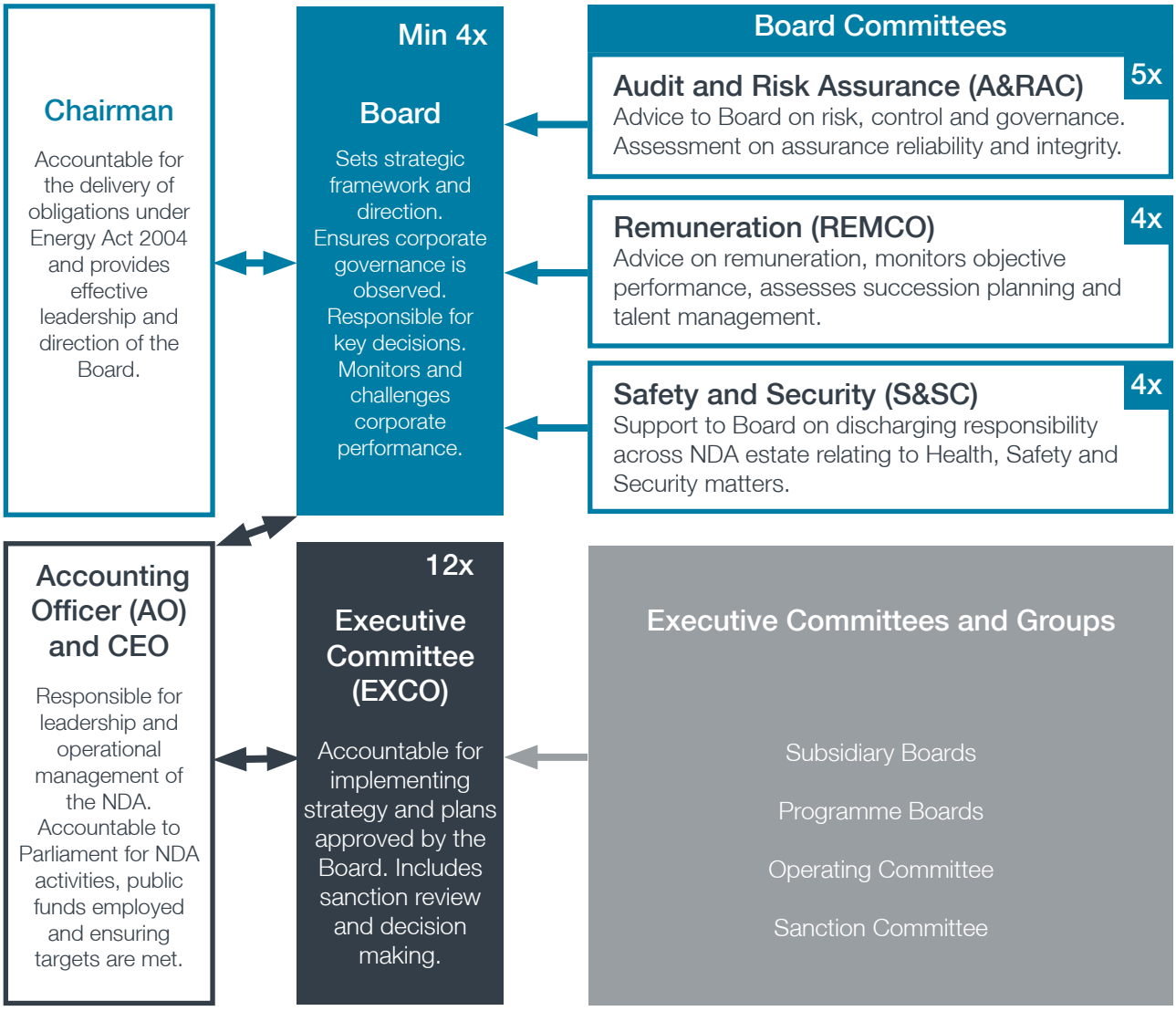
Introduction

The NDA is sponsored by the Department for Business, Energy and Industrial Strategy (BEIS). Oversight and governance of the NDA is provided by UK Government Investments (UKGI). The formal agreement between the NDA and BEIS is set out in a framework document, supported by a Memorandum of Understanding between BEIS and UKGI.

This governance statement summarises the structure of the NDA Board and the Executive and the effective governance over the key activities undertaken during 2016/17. It explains the frameworks used to measure the effectiveness of delivery, the findings of key audit and assurance reviews and associated improvement actions.

The Authority's Governance Framework

We are governed by the Energy Act 2004, the government's Framework Document and Cabinet Office guidelines for Non-Departmental Public Bodies (NDPBs). Our structure is summarised below and further explained in this statement.



Note: The Board have established a Programmes and Projects Committee (P&P Committee). The first meeting took place in May 2017. This committee will provide oversight on major projects and programmes requiring enhanced assurance and/or Board sanction.

The current NDA Board: back row from left to right, Volker Beckers, David Peattie, Adrian Simper, Tom Smith and Rob Holden. Front row, from the left, Evelyn Dickey, Janet Ashdown and David Batters

At the 31 March 2017, we had 9 directors - 3 executive plus 6 non-executive directors (NEDs) including the non-executive Chair. Board membership and current terms, committees and attendance for those who have served during 2016/17 are summarised below:

		Number of meetings (held) and attended			
Name	Position and Current Term	Board (13)	A&RAC (5)	REMCO (4)	S&SC (4)
Stephen Henwood	**Chairman** (1 Mar 2008 - 28 Feb 2017)	9 of 9	3 of 4	3 of 3	1 of 3
Tom Smith	**Senior NED** (5 Mar 2013 - 28 Feb 2017) and **Chairman** (from 1 Mar 2017 - 28 Feb 2020)	13 of 13	4 of 5	-	1 of 1
Volker Beckers	**NED** (1 Mar 2015 - 28 Feb 2018) and **Chair of A&RAC** (from 17 Mar 2016)	12 of 13	5 of 5	-	-
Evelyn Dickey	**NED** (1 Mar 2015 - 28 Feb 2018) and **Chair of REMCO** (from 1 Jun 2015)	13 of 13	-	4 of 4	-
Janet Ashdown	**NED** (1 Jun 2015 - 31 May 2018), **Chair of S&SC** (from 17 Mar 2016) and **Senior NED** (from 1 Mar 2017)	12 of 13	4 of 5	-	4 of 4
Ken McCallum	**NED** (1 Mar 2014 - 31 Mar 2017)	11 of 13	-	3 of 4	-
Rob Holden	**NED** (1 Jun 2015 - 31 May 2018)	12 of 13	-	4 of 4	4 of 4
John Clarke	**CEO and Accounting Officer** (2 Apr 2012 - 28 Feb 2017)	9 of 9	3 of 3	3 of 3	2 of 3
David Batters	**Chief Financial Officer** (from 18 Oct 2010)	13 of 13	4 of 5	-	3 of 4
Adrian Simper	**Director of Strategy** (from 1 Mar 2014)	13 of 13	-	-	-
Pete Lutwyche	**Chief Operating Officer** (3 Mar 2014 - 31 Oct 2016)	5 of 5	-	-	2 of 2
David Peattie	**CEO and Accounting Officer** (from 1 Mar 2017)	4 of 4	1 of 1	1 of 1	1 of 1

Governance Statement (continued)

Current Non-Executive Directors (NEDs) including Non-Executive Chair

Tom Smith - Chairman
Tom began his career in the Diplomatic Service, working in London, Hong Kong and Beijing between 1979 and 1990, when he was part of the team that negotiated the 1984 treaty with China on Hong Kong.

In 1990 he joined Trafalgar House plc and held several senior positions before becoming Managing Director of Midland Expressway Ltd (MEL) in 1997, in which role he led the development and construction of the M6Toll, the UK's first privately financed toll motorway. He subsequently joined the Go-Ahead Group plc as Managing Director Rail Development and over 10 years was instrumental in turning Go-Ahead into one of the country's largest passenger rail operators. He was Chairman of the Association of Train Operating Companies from 2009 to 2013. He was a non-executive director of Highways England from 2014 to 2016.

Current external appointments include:
Chair - Angel Trains Group
Member - Institute of Directors.

Rob Holden CBE – Non-Executive Director
Between 1999 and 2009, Rob led the London and Continental Railways (LCR) team in a series of transactions that secured the future of the Channel Tunnel Rail Link (later renamed High Speed 1). In 2009 he was awarded a CBE for services to the rail industry.

Current external appointments include:
Non-Executive Director - Electricity North West
Chair - High Speed 1
Other positions - Participation on Price Waterhouse Cooper's infrastructure advisory board.
Work for the Cabinet Office's Major Projects Review Group.

Volker Beckers – Non-Executive Director
Volker was Group CEO of 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 and Commerce, and, since 1999, as Deputy Chair of the Executive Commercial Management Committee at the German Association of Energy and Water Industries (BDEW). He was also member of the Executive Committee of UKBCSE (now Energy UK). He chairs the Business Energy Forum and is Honorary VP of the Energy and Utilities Forum.

Current external appointments include:
Non-Executive Director - Elexon Ltd.
Chair - SpencerAM Ltd (until August 2016), Albion Community Power plc, Reactive Technologies Ltd.
Director and Honorary VP - British Institute of Energy Economics
Other positions - Member of the Board of Directors, Danske Commodities A/S; Vice- Chairman (since October 2016), Member of UK PwC Advisory Board

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

Current external appointments include:
Non-Executive Director - SIG plc; Marshall's plc.
Chair - 'Hope in Tottenham' charity.

Evelyn Dickey – Non-Executive Director
Evelyn 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.

Evelyn has worked in HR consultancy and as HR Director (HR Operations) for Boots the Chemist, before joining Severn Trent's HR function in November 2006.

Current external appointments include:
Director - HR Function, Severn Trent

Board Performance

Compliance with the Government Code of Corporate Governance

We comply with the Government Code of Corporate Governance and government guidance for an arm's length body of our size and complexity:

- The Board monitors the NDA's performance and directs its business effectively, including playing an active role in stakeholder relations
- The Chair is responsible for leading the Board and non-executive directors to challenge and help develop strategy
- The Board receives frequent updates on the NDA's financial position, forecasts and sensitivities
- The Board has an appropriate balance of skills and experience to discharge its responsibilities
- The Board ensures that a balanced assessment of performance is reported to BEIS and regularly debates the main (corporate strategic) risks facing the NDA
- The Audit and Risk Assurance committee has oversight of, and provides challenge to, the management and internal control systems
- The Board places particular emphasis on the quality and integrity of the data submitted for its use. Critical processes and outputs fall within the control of the NDA Assurance Framework and are subject to peer review and/or independent review by Internal Audit.
- The Board reviews the terms of reference for its sub-committees annually
- Executive director remuneration is determined by the remuneration committee within the guidelines set by HM Treasury and BEIS. Non-Executive remuneration is set by BEIS and reviewed annually

Board performance and effectiveness review

The Board undertakes an annual evaluation of its effectiveness, led by the senior non-executive director. In 2016, this took the form of a measured assessment against the National Audit Office's (NAO) criteria for good practice in public sector boards. The conclusion was that the Board operates well and performs satisfactorily or better as measured against the NAO criteria and that this had been achieved at a period of transition, particularly in the non-executive membership of the Board. Several areas for improvement were identified, notably:

- A need for greater Board engagement in setting and reviewing strategy on a regular basis. In response to this, a full day of strategy review was held in October 2016. This will be repeated annually and, in addition, the agenda of regular Board meetings now includes a greater focus on strategic issues, which management are encouraged to bring to the Board.
- The quality of the performance reports to the Board needs to be improved, in particular to include forward as well as backward-looking performance assessments, early warnings of issues and detail on management actions to address performance shortcomings. These changes have been progressively implemented by management, and performance reporting is a priority area of our new CEO.
- The Board, and particularly the non-executive members, would benefit from improved engagement with the NDA's key government stakeholders. Ways of doing this have been discussed with BEIS and UKGI, and are being implemented in the current year.

For the 2017 review, it is planned to arrange external facilitation to provide a more independent and in-depth evaluation.

Governance Statement (continued)

Board Committees

The Board is supported by its committees as outlined below:

Audit & Risk Assurance Committee (A&RAC)

The A&RAC consists of 3 non-executive directors:

- **Volker Beckers (Chair)**
- **Tom Smith** (up until the point of becoming NDA Chairman)
- **Janet Ashdown**

Regular attendees include:

- **Accounting Officer (CEO)**
- **Chief Financial Officer**
- **Assurance Director**
- **Head of Group Internal Audit**
- **Head of Financial Operations**

Number of meetings in the year: 5

The committee oversees the effectiveness of risk management and control systems; the internal audit function and results; external audit strategy and results; and recommends approval of the Annual Report and Accounts.

During the year, the A&RAC has:

- Ensured the NDA met all financial reporting obligations
- Ensured that NDA accounting practices are in line with BEIS and HM Treasury guidance
- Supported the NDA's changed approach to risk management, which places increased emphasis on the strategic risks facing the organisation
- Provided oversight of the control framework for information risk management and associated improvement plans
- Provided oversight on the further development of the NDA's Risk and Assurance Framework.

Remuneration Committee (REMCO)

The REMCO consists of 3 non-executive directors:

- **Evelyn Dickey (Chair)**
- **Ken McCallum** (until March 2017)
- **Rob Holden**

Regular attendees include:

- **Accounting Officer (CEO)**
- **HR Director**

(except for discussion in relation to their own remuneration.)

Number of meetings in the year: 4

The Committee advises the Board on the remuneration and terms of service for the Chief Executive Officer and the executive directors, and monitors their performance in delivering the annual objectives agreed by the Board.

More details on REMCO are contained in the Remuneration and Staff report on page 48.

Safety and Security Committee (S&SC)

The S&SC consists of 2 non-executive directors:

- **Janet Ashdown (Chair)**
- **Rob Holden**

Regular attendees include:

- **Accounting Officer (CEO)**
- **Assurance Director**
- **Director of NSSSE**

Number of meetings in the year: 4

The committee supports the Board on health, safety (including both nuclear and occupational safety) and environmental performance in the NDA estate. It also provides oversight of security across the estate.

Issues reviewed by the S&SC Committee during the year included the estate-wide safety risk management, safety performance with particular focus on specific incidents and the SLC response to these, and overall trend analysis.

On behalf of the Board, the Committee also pays particular attention to the corporate strategic risk 'NDA Estate unable to deal with a cyber attack' see page 46.

Executive leadership team

David Peattie
Chief Executive

Executive Board Director

David began his career at BP in 1979 as a petroleum engineer and, during 33 years at the company, held a number of technical, commercial and senior management positions.

His roles included Head of BP Group Investor Relations, Commercial Director of BP Chemicals, Deputy Head of Global Exploration and Production, Head of BP Group Planning, and finally as Head of BP Russia where he was responsible for BP's interests in the TNK-BP joint venture as well as its businesses in the Russian Arctic and Sakhalin. In addition, he was BP's lead Director on the board of TNK-BP and Chairman of its Health, Safety and Environment Committee.

Current additional appointments include:
Director - Peattie Energy Advisory Ltd

David Batters
Chief Financial Officer and Programme Director

Executive Board Director

Prior to joining the NDA, David spent 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.

As CFO, David is responsible for NDA's finance function (Finance, Modelling and Analysis, Insurance, Pensions) Business Planning, Revenue, Strategic Businesses and Internal Audit. He is also the Executive responsible for Magnox Ltd, Dounreay Site Restoration Ltd and LLW Repository Ltd with respect to performance and contract management.

From December 2011 to April 2012, he was the Accounting Officer and Acting Chief Executive Officer of the NDA.

Current additional appointments include:
Chair - Radioactive Waste Management Ltd.
Non-Executive Director - Solent Healthcare NHS Trust (until August 2016)

Adrian Simper OBE
Strategy and Technology Director

Executive Board Director

Adrian joined the nuclear industry in R&D at Sellafield. His subsequent career has included strategic roles in R&D and technology, project delivery, commercial and finance both in the UK and the US.

He played a key role in setting up the NDA through the transfer of assets and liabilities from BNFL and the associated re-structuring of BNFL.

He was appointed to the Order of the British Empire (OBE) in the 2017 New Year Honours' list, recognising his services to the UK nuclear industry in Japan.

Current additional appointments include:
Chair - International Nuclear Services Ltd, Radioactive Waste Management Ltd (until August 2016)
Other positions - Trustee of St Bees School

Kenna Kintrea
Assurance Director

Non-Board Director

Kenna has extensive experience in the delivery of major projects and programmes. She 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.

Prior to joining the NDA, Kenna was with the Olympic Delivery Authority (ODA) for 6 years 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.

Current additional appointments include:
Board Member - Civil Nuclear Police Authority (CNPA) and Major Projects Association.

Governance Statement (continued)

Duncan Thompson
Sellafield Programme Director

Non-Board Director

Duncan has a mechanical and environmental engineering background with management experience gained over 27 years in the UK and overseas. He has worked for The London Stock Exchange, Ford, British Overseas Aid and Unicef and as a management consultant he worked with many companies including National Grid Transco, Railtrack, NDA and BP. Since joining NDA in 2006, he has been instrumental in establishing the organisation's structure. He has most recently led the Sellafield Model Change programme.

Rob Higgins
Director of Business Services

Non-Board Director

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

Current additional appointments include:
Chair - NDA Properties Ltd, NDA Archives Ltd, Direct Rail Services Ltd.
Non-Executive Director - Sellafield Ltd, Energy Coast West Cumbria Ltd (trading as Britain's Energy Coast)

David Vineall
Human Resources Director

Non-Board Director

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 BAE Systems Shipbuilding and Support business across Glasgow and Portsmouth.

Current additional appointments include:
Chair – Energus
Other positions - Trustee Director of the Combined Nuclear Pension Plan (CNPP).

Paul Vallance
Director of Communications & Stakeholder Relations

Non-Board Director

Paul began his career at BNFL, becoming Group Communications Director.

He joined the NDA from Rolls-Royce, where he held a number of senior positions. Paul was part of the executive team that established Rolls-Royce's Nuclear sector, which included both the Civil Nuclear and Submarines businesses. Paul was also the customer lead for a number of Rolls-Royce's key commercial relationships.

In his final role at Rolls-Royce, Paul was Director of Communications and Marketing for the Land and Sea Division, which incorporated the Marine, Nuclear and Power Systems businesses.

Current additional appointments include:
Non-Executive Director - Radioactive Waste Management Ltd

The team meets on a monthly basis, with a rolling agenda covering key areas including:

- Strategy - monitoring progress towards our long-term objectives for delivering the mission
- Planning - facilitating estate-wide future decisions, setting out the activities that will deliver objectives in the right timeframe and within budget
- Contracting - driving effective contractual management at our SLCs, resulting in appropriate reward to contractors and their respective PBOs (and ultimate shareholders)
- Performance Management - challenging SLC performance and endorsing plans, as well as proposals for managing deviations from plans, ensuring there is robust challenge, support, dialogue and action where appropriate
- Assurance of Delivery - providing confidence that the NDA Strategy is being delivered, that the right people and plans are in place and overall risk is being managed.

Financial Control

The NDA has strong financial controls based on well-defined delegated authority and a clear budgetary framework. The system remains effective with no issues of note identified by Internal or External Audit during the year.

Programmes and projects control across the estate is exercised by the executive through the executive sanction meetings.

Risk Management

Managing risk is a fundamental NDA responsibility. The NDA follows the international good practice in ISO 31000[1] with the aim of:

- Improving business performance and efficiency
- Safeguarding the NDA's staff, contractors, assets, environment and reputation
- Promoting good governance by integrating risk management and internal control
- Fostering a risk aware culture that ensures decision-making reflects the NDA's appetite for risk
- Providing assurance to stakeholders that risks are being actively managed

While the Board is ultimately accountable for NDA risks, all staff have a duty to make sure risks in their areas of responsibility are identified, managed and reported.

Where activities are delivered by the SLCs, subsidiaries and other third party organisations, they are responsible for managing certain delivery-related risks. However, accountability for the impacts often remains with the NDA.

In discharging its duties, the NDA:

- Ensures that corporate NDA risks are identified and effectively managed
- Assures the extent to which SLCs, subsidiaries and other third parties are effectively managing risks on our behalf.

Risks identification and reporting

The Board has identified 14 corporate strategic risks, each with a supporting risk assessment and executive-level sponsor, mapped to 1 of our 4 corporate purposes. Where possible, operational level risks are mapped to the 14 corporate strategic risks, providing an overall coherent picture.

Of the 14 corporate strategic risks, 5 were subject to a detailed review by the Board in 2016/17. In addition, workshops were held to assess mitigation for all 14 risks and results were reported to the Board.

NDA Corporate Strategic risks mapped to core purposes

Set Strategy

- Significant scope change
- Technical solutions fail to deliver desired outcomes
- NDA has insufficient funding to achieve its mission over the next 5 years

Enable Progress

- NDA assets do not perform as required adversely impacting on NDA mission
- Supply chain performance does not support NDA mission
- Insufficient capability and capacity to deliver the NDA mission

Drive NDA Excellence

- Failure of control environment leads to fraud, bribery and corruption
- Ineffective NDA lifecycle governance of subsidiaries and affiliates
- NDA estate unable to deal with a cyber attack
- Misaligned stakeholder expectations

Optimise Delivery

- Failure of contracts to deliver outcomes
- NDA investments in programmes and projects do not efficiently achieve promised/desired benefits
- Malicious activity, inappropriate behaviour or poor cultures leads to a major safety or security incident
- Failure to deliver the benefits of Sellafield subsidiary

[1] International Standard for Risk Management

Governance Statement (continued)

Risks subject to a detailed review by the Board or Committees in 2016/17:

Risk	Rationale	Mitigating Actions
Malicious activity, inappropriate behaviour or poor cultures leads to a major safety or security incident.	Conducting operations in a safe and secure manner is a key performance requirement. The Board has a low risk appetite in this area.	Continued senior leadership focus on safety and security, including via the Safety & Security sub-committee of the Board Site level safety and security management systems meet regulatory requirements and our expectations Site level emergency and continuity plans should an incident occur
NDA estate is unable to deal with the effect of a cyber attack.	With cyber threats increasing, the NDA and its estate is making significant investments to increase cyber resilience.	Launch of an estate-wide cyber, security and resilience programme. Ongoing engagement with nuclear sector, government and regulators
Assets do not perform as required adversely impacting on the NDA mission.	The age and condition of some assets could mean they fail unexpectedly, impacting on project and programme delivery.	An asset management strategy developed from industry good practice, supported by contracts and incentives to deliver performance requirements Continued assurance of delivery against Asset Management Plan Business Continuity plans to be in place should an asset's operation be disrupted
Failure of control environment leads to fraud, bribery and corruption.	The NDA spends large amounts of taxpayers' money through third parties. Preventing fraud, bribery and corruption is a key concern.	Fraud, bribery and corruption policies supported by a whistle blowing process Refreshed staff training to counter fraud and bribery Internal audit programme to address high risk areas
Ineffective NDA lifecycle governance of subsidiaries and affiliates.	The NDA delivers some of its mission through subsidiaries. A Governance Framework is important to ensure good performance.	Development of an enhanced subsidiary governance and performance management framework

Information Governance

The Senior Information Risk Owner (SIRO), Rob Higgins, has responsibility for all aspects of the Information Governance Strategy across the NDA estate. This includes:

- Knowledge and Information management;
- Information and Communications Technology (ICT);
- Management of Intellectual Property;
- Business Continuity; and
- Information Risk/Assurance.

This strategy is supported by an Information Governance Programme (IGP) which aims to maximise business value from NDA-owned knowledge and information assets.

This year the SIRO has published a Cyber Security Strategy in response to the emergence of the BEIS Civil Nuclear Cyber Security Strategy (CNCSS) and the National Cyber Strategy, launched in November. Developed in conjunction with the Office for Nuclear Regulation and other government experts, this sets out the key requirements for cyber resilience in the NDA Estate.

The NDA is implementing a Cyber Security and Resilience Programme (CSRP) and working closely with stakeholders in developing this to meet the increasing threat.

The SIRO forum, comprising senior NDA, subsidiary and SLC Directors responsible for Information Governance, meets regularly to provide governance over the estate-wide assurance programme and audit performance reviews in these areas.

Information Risk Management performance continues to improve across all the estate's organisations. However, the cyber threat is increasing and developing suitably experienced and qualified resources to address these issues is a national challenge. The IGP and the CSRP are crucial to managing these risks effectively.

Effectiveness of the control environment

As Accounting Officer, I have the responsibility for maintaining a sound System of Internal Control and reviewing its effectiveness. I am also personally responsible for safeguarding the allocated public funds and departmental assets, as detailed in the HM Treasury publication 'Managing Public Money'. I am reliant on the opinion from my Head of Group Internal Audit that my predecessor John Clarke carried out these responsibilities effectively, prior to my appointment on 1 March 2017. I am supported by the NDA Internal Audit function, the External Auditors (the National Audit Office) and other assurance functions both within the NDA and across the estate.

The NDA System of Internal Control has been in place for the period commencing 1 April 2016 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 relevant rules and regulations.

Since it is impossible to eliminate all risk of failure in achieving policies, aims and objectives, the system can only provide reasonable assurance of effectiveness, rather than absolute assurance. My executive team members are responsible for developing and maintaining the Internal Control Framework as it applies to their specific functional areas. The Board and the Audit and Risk Assurance Committee provide oversight and challenge to the System of Internal Control, ensuring that plans are in place to address any weaknesses.

In addition to the controls operated by the NDA, significant reliance is placed on the controls operated by assurances across the estate by subsidiaries and SLCs.

The NDA relies on business critical models. The associated procedures are reviewed and updated regularly so that reliance can be placed on them for decision making.

In line with the Government Internal Audit Agency standard ratings, the NDA's Head of Group Internal Audit has provided a moderate level of assurance 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 of Internal Audit, including its oversight of the various assurance activities undertaken by the NDA, its subsidiaries and engagement with the SLC Internal Audit functions.

The NDA Internal Audit work for 2016/17 was designed to provide assurance against key business processes along with specific corporate risks. The audit plan covers both the NDA and all subsidiary organisations, with the exception of Sellafield which operates its own, stand-alone, Internal Audit function.

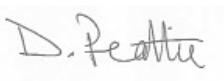
The majority of NDA-led Internal Audit reviews completed by the year end showed that the processes and controls could be categorised as either reasonable or good. However, significant or notifiable weaknesses were reported to the NDA against its arrangements for managing Business Continuity & Emergency Response; managing the Information Governance National Programme; and managing arrangements for the third term of the contract with the Parent Body Organisation (PBO) running the Low Level Waste Repository. Improvement actions were agreed with NDA subsidiary International Nuclear Services (INS) following a review of its arrangements for project management and with Direct Rail Services (DRS) following a review of its methods for managing Intermodal Contracts.

Previous sections of this report have referred to the Magnox competition process which led to a legal challenge of the award to Cavendish Fluor Partnership (CFP). Following CFP taking on the role of Parent Body Organisation for Magnox on 1 September 2014, the consolidation process was started. This was to ensure the scope of the contract, as assumed in the 2012 tender, matched the actual status of decommissioning work required at each site. It was scheduled to be complete by September 2015 and has been subject to a number of delays.

During the year, and at the request of the Board, Internal Audit reviewed the consolidation process. Since the consolidation process is still ongoing, an interim report has been issued detailing several areas of concern for Executive and Board consideration.

As Accounting Officer, I am required to assert that the NDA has an effective system of internal control. In reaching this conclusion, I have taken advice from the Head of NDA Group Internal Audit and my predecessor as Chief Executive. I have also been mindful of the outcome of the Magnox litigation and the potential lessons to be learned from the conduct of the competition and the subsequent awarding of the contract in 2014. I acknowledge that this will be subject to independent scrutiny by the NAO and the Holliday enquiry, and I do not seek to prejudge their conclusions.

On balance, therefore, as Accounting Officer I am confident that an effective system of internal control has been in place throughout the past year that is appropriate to meet the NDA's objectives.



David Peattie
Accounting Officer and Chief Executive Officer
11 July 2017

Remuneration and Staff Report

Introduction

The Remuneration Committee has a primary role of providing confidence to stakeholders that the NDA, through its remuneration policy, is able to attract, reward and incentivise executives who have the skills and expertise to achieve the organisation's goals effectively

The Board and Directors
During 2016/17, there were a number of changes and key appointments at Board level.

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

Tom Smith, the current Chairman, was appointed on 1 March 2017 for a period of 3 years. Tom replaces Stephen Henwood whose tenure as Chairman expired on 28 February 2017. Tom had served on the Board as a non-executive director from 5 March 2013.

The Board
During the year, John Clarke formally gave his notice to retire after nearly 5 years as CEO and a lifelong career within the nuclear sector. At the Board's request, his notice period was extended to ensure an orderly succession process and, once David Peattie was appointed CEO on 1 March 2017, he stepped down from the NDA Board and continues to support the NDA as a Special Advisor for a fixed period.

Executive director Pete Lutwyche resigned from the Board on 31 October 2016 and left to join another company within the nuclear sector at a senior level.

The table on page 39 (Governance Statement) summarises Board membership and current terms.

Public servants 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 BEIS in conjunction with Scottish Ministers following consultation with the NDA Chairman 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 2016/17 financial year.

Remuneration Committee

The objectives of the Remuneration Committee are as follows:

- To determine the remuneration and terms of service of the 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 executives of the appropriate calibre
- 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 NDA's employment policies and its revision, including matters of magnitude in relation to HR issues such as talent management and executive succession planning.

The major Remuneration Committee activities in 2016/17 were:

- The review of performance at a NDA level and individual executive level to determine the annual bonus awards for the year 2015/16
- Agreement of the vesting of the Long-Term Incentive Plan (LTIP) awards granted in 2013
- Agreement of the awards for the LTIP plan to vest in 2019
- The continual review of executive remuneration benchmarking and implications on NDA executive team, including an external review of the current LTIP scheme methodology
- A review and consultation with government departments on pension flexibility in the form of an allowance for higher earners within the NDA
- The recruitment and appointment of a Chief Executive Officer to replace John Clarke

Remuneration Committee

The Remuneration Committee consists of 3 non-executive directors:

- **Evelyn Dickey (Chair)**
- **Rob Holden**
- **Ken McCallum (until March 2017)**

Number of meetings in the year: 4

Additional attendees for topics where there is no conflict of interest:

- **Chairman**
- **Chief Executive**
- **HR Director**

Remuneration policy

Economic and market context

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

Executive rewards should rightly acknowledge the experience and professional expertise required to address the demanding challenge of UK nuclear decommissioning, whilst also providing value for taxpayers in a constrained economic climate.

The challenges for NDA leadership range from setting future decommissioning strategy to optimising the delivery of decommissioning plans through the optimal contracting model or through its subsidiaries, including Sellafield Ltd. The leadership is specifically responsible for overseeing the contracts to bring Dounreay and Magnox sites to interim end states, as well as seeking innovative ways to maintain around £1 billion per annum of commercial income.

These challenges require commercial skills, extremely specialised technical expertise and leadership experience - a highly sought-after blend of qualities in the UK and wider markets that inevitably commands a premium. The competitive market for such talent is intensified by increasing demands in the international nuclear sector (be it new build or decommissioning), as well as 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 public and private sectors reward data to set a level of reward that ensures the NDA can confidently drive forward the improved performance needed across our estate. A key principle is that the NDA aims to pay executives around the median in comparison to comparable organisations in the public and private sectors.

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

Executive Directors Contracts

Non-Executive Directors

Non-executive directors are appointed by the Secretary of State for BEIS in conjunction with Scottish Ministers following consultation with the NDA Chairman and in line with codes of practice issued by the Commissioner for Public Appointments.

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 entitlements and other benefits.

Salaries

In setting salaries this year, the Committee again 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 5th consecutive year, set at 1%.

In addition, following a review of a change in scope of roles and the NDA executive reward policy, the Committee concluded that the salaries of 3 Executive Board members (John Clarke, Pete Lutwyche and Adrian Simper) warranted an increase and these were applied with effect from July 2016.

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.

Remuneration and Staff Report (continued)

69% of corporate targets for 2016/17 were achieved, reflecting the performance outlined elsewhere in the annual report. This outcome was subject to internal audit review, endorsement by the BEIS internal audit 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 and Magnox litigation outcome and decided to set the corporate element at 0%.
The individual performance and contribution of each executive was also reviewed and percentage achievement figure confirmed. Due to the outcome of the Magnox case the REMCO concluded that the executive would not receive performance-related pay awards for the 2016/17 performance year.

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 3 years post-grant date. The final value of any LTIP award can fall within a range between 0% and 200% depending on performance against targets and improvements to the operating plan as determined by the Remuneration Committee. The LTIP operates with rolling annual awards with a new payment figure calculated at the start of each 3 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 2015-2018 and 2016-2019. Final payment of the 2014-2017 LTIP was reduced by one third to reflect Magnox litigation. 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 unless previous membership applied. Alpha is an occupational pension scheme that provides a defined benefit worked out on a career average basis. A career average pension scheme means employees build up a pension based on a percentage of how much they have earned each year. 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 page 56 for further detail. Pension benefits for executive directors are provided through the Civil Service Pension Arrangements.

Employees are automatically enrolled into alpha (or an existing scheme) on appointment to employment at the NDA. This is in line with the auto enrolment rules of the Pensions Act 2008, employees have the ability to opt out of the scheme at any time or elect to join the partnership pension arrangements offered under the Civil Service Pension Arrangements.

In order to attract and secure the services of the new CEO, a pension allowance in lieu of pension membership was offered as part of his contract as permitted under Cabinet Office guidance.

Other Benefits
Benefits are listed in the Directors' Emoluments table with appropriate footnotes.

As in previous years, this included for the outgoing 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 covered 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. This facility is not required by the new CEO.

All directors receive £12,000 per annum as a car allowance.

Fees
The remuneration of the Chairman and non-executive directors is determined by BEIS. Non-executive directors are not involved in decisions relating to their own remuneration.

Non-executive directors are entitled to fees of £25,000 per annum. Those who chair Board Committees also receive a fee supplement. Evelyn Dickey was appointed as Chair of the Remuneration Committee shortly after she joined the Board in March 2015 and the supplement paid at that time to Committee Chairs was £7,500 per annum, which she has been receiving since then. Following succession in the chairmanship of 2 other Committees, it was confirmed by the Chief Secretary to the Treasury that the fee supplement for new Chairs would be £5,000 per annum. Volker Beckers, Chair of the Audit & Risk Assurance Committee, and Janet Ashdown, Chair of the Safety & Security Committee, have received this supplement with effect from 17 March 2016. Evelyn Dickey's supplement has been adjusted to £5,000 per annum with effect from 1 June 2017. Approval for the same supplement to be paid to Rob Holden, Chair of the new Projects & Programmes Committee is expected shortly.

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

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

	2016/17 Total £'s	2015/16 Total £'s
Band of highest paid Director's total remuneration	395,000 - 400,000	485,000 - 490,000
Median total remuneration	72,769	69,455
Ratio	5.4:1	7.1:1
Band of lowest paid employee's total remuneration	20,000 - 25,000	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.		

Remuneration and Staff Report (continued)

Staff Report

The NDA is focused on developing a high-performing organisation, which is demonstrated by our commitment to continuous improvement and to deliver planned outcomes consistently and effectively. The following sections provide updates on key areas of progress in 2016/17.

Development and capability

A focus on leadership

We place particular emphasis on developing our leadership and management capabilities as we drive towards being recognised as an exemplar Non-Departmental Public Body (NDPB) and high-performing organisation, and thus fully understand that leadership development is a key enabler.

In 2016/17, about a third of the organisation undertook a series of leadership assessments to benchmark where we are against a broader leadership cohort and identifying strengths and gaps. Key aims were:

- Ensuring we understand our leadership capability
- Ensuring we robustly challenge ourselves against external benchmarks in order to improve our leadership practice
- Raising our leadership expectations
- Developing the application of 'living our values' against our future needs
- Investing in targeted development

Whilst our aim is to close a number of the gaps through targeted development of our employees, we have recruited and will continue to recruit from the marketplace to strengthen our capabilities.

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 (e.g. mentoring) and the remaining 10% through direct training or a classroom-based approach.

Embedding the new Career and Progression Framework

Ensuring we have the right people in role, with the right skills, is vital to delivering our mission. In line with good practice, the new Career and Progression Framework launched in 2015/16 underwent a post implementation assurance review in 2016/17. The framework details the key skills and capabilities required at every level and within each of our 3 broad job families. The review reported very favourably and we are currently working through continuous improvement recommendations to ensure that it continues to drive the right skills and capability improvements for the NDA.

During the year, as part of our policy and process improvement plan, we reviewed and updated our recruitment standards to ensure that they reflected the skills, capability and behavioural requirements of the new Career and Progression Framework. This naturally fed into a review of our approach to talent, and thus a golden thread running through our key processes to ensure the standards and expectations of employees are clear and consistent from joining the organisation through to performance management and career development.

Career and Progression Framework

As a strategic body, we fully recognise that how we do things is as important as what we do. Our 4 core values are now embedded in our performance management process guiding our work, underpinning everything we do, describing what is important to us, what we hold dear and the basic elements of our approach to work.

These values are:

In order to ensure these are fully understood and embedded, we also revised our performance management assessment measures. These revised measures emphasise and effectively assess a holistic performance rating which takes into account both what has been delivered and achieved and how.

A comprehensive series of line manager and employee workshops have been delivered to ensure that all employees in the organisation understand what is expected of them in their roles, and how this will be assessed.

External Recognition

The above clearly demonstrates that the NDA is fully committed to excellence in all our people management practices and this is reflected by a Silver Investors in People (IiP) award.

IiP is the standard for people management at 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 silver status is recognition that the organisation meets the criteria to be an excellent employer, is an outperforming place to work, with a clear commitment to sustained success.

A further assessment against the full standard is scheduled for September 2017 to align with our business planning cycle.

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

Investors in People (IiP) standard

Training and development expenditure in the year included the leadership development programme and activity to raise professional standards against our core competencies.

There were 7 secondments outside of the NDA and 692 face-to-face training days were recorded.

Remuneration and Staff Report (continued)

Headcount and employee costs

NDA Group staff costs

This information has been audited.

NDA Group 2017	NDA Authority (a)		Subsidiaries (b)		Total
	Permanently employed staff	Others	Permanently employed staff	Others	
	£m	£m	£m	£m	£m
Wages and salaries	17	3	626	52	**698**
Social security costs	2	-	72	-	**74**
Pension costs	3	-	102	-	**105**
Total staff costs	22	3	800	52	**877**

This information has been audited.

NDA Group 2016	NDA Authority (a)		Subsidiaries (b)		Total
	Permanently employed staff	Others	Permanently employed staff	Others	
	£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**

Note: Sellafield Ltd became a subsidiary of NDA, and therefore part of NDA Group, with effect from 1 April 2016. This has resulted in a significant increase in reported NDA Group staff costs between 2016 and 2017.

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

The Group participates in various pension schemes; both defined contribution and defined benefit. Further details can be found in note 26 to the Accounts.

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

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

NDA Group	Permanently employed staff no.	Others no.	Total 2017 no.	Total 2016 no.
Directly employed - Authority	206	32	238	243
Directly employed - Subsidiaries	11,878	1,056	12,934	892
Total	12,084	1,088	13,172	1,135

Note: Sellafield Ltd became a subsidiary of NDA, and therefore part of NDA Group, with effect from 1 April 2016. This results in a significant increase in reported NDA Group staff numbers between 2016 and 2017.

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

Authority 2017	Male	Female	Total
CEO	1	-	1
Exec Directors excl. CEO	2	-	2
Other Directors (non-Board)	4	1	5
Other employees	115	83	198
Total	122	84	206

Tax arrangements of public sector appointees

As a public body, we adhere to the IR35 regulations as the end user in deeming if any temporary roles will be captured within the legislation or will be deemed out of scope of the legislation. 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 2017 for those individuals on more than £220 per day and lasting more than 6 months are detailed below. There were 4 new off-payroll workers in the year whose assignments lasted more than 6 months:

Length of appointment at 31/3/17	No. of off payroll contractors
Less than 1 year	13
1-2 years	5
More than 2 years	N/A

Employee turnover and 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. This includes access to an external employee assistance service (EAP), helping us manage and support individuals back to work.

For 2016/17 an average of 4.9 days per year was lost to sickness absence. This equates to an absence rate of 1.9% and is less than the national average of 6.3 days sick leave per year.

Staff Turnover

Staff Turnover in the NDA is below average. The average length of service is 7.2 years and for the year 2016/17 turnover of permanent staff was 5.6%. This compares to an average external turnover rate of 13.6% (as per latest 2014/15 CIPD survey).

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

This information has been audited.

2017 Exit package cost band	Number of compulsory redundancies	Number of other agreed departures	Total no. of exit packages by cost band
£100,000-£149,000	0	1	1
Total no of exit packages	0	1	1

In 2015/16, there was 1 such individual who left the NDA with an exit package as set out below:

This information has been audited.

2016 Exit package cost band	Number of compulsory redundancies	Number of other agreed departures	Total no. of exit packages by cost band
£100,000-£149,000	0	1	1
Total no of exit packages	0	1	1

Recruitment and Diversity

The NDA recognises that organisations embracing diverse workforces deliver better results. Business benefits of diversity and inclusion include improved employee engagement and motivation making us more capable to respond to our stakeholders. A diverse workforce with clear collective goals is generally associated with innovation, comprehensive and better-framed strategies, and decisions that are more robust resulting from increased challenge and different perspectives.

In 2016/17, the NDA commissioned Capita to undertake a thorough review of equality, diversity and inclusion across its estate, including holding a number of focus groups with employees. The Executive Team were briefed on the results in March 2017 and, during 2017/18, will plan and prioritise areas of development for NDA and with the wider estate.

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

Remuneration and Staff Report (continued)

In line with our 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.

During the year, 14 permanent appointments (14 FTEs) were made. This is against a backdrop of a highly competitive marketplace where skilled technical and specialist skills are increasingly in demand, requiring a continued focus to build our external talent pipeline.

Employee Consultation and Collective Bargaining

Employee involvement is critical to business success and, in support of this, a Staff Consultation Group exists for employees and management to discuss a range of issues.

Employees are also covered by a collective bargaining arrangement with Prospect Union, with the agreement covering:

- The annual pay award
- Holidays
- Hours of work

The arrangement covers all employees other than the Executive.

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

Other information - 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)	2016/17 contributions
Up to £15,000	3.80* / 4.60
£15,001-£21,210	4.60
£21,211-£48,471	5.45
£48,472-£150,000	7.35
Over £150,000	8.05

*Members who are in Classic or who moved into alpha from Classic.

Benefits in Classic accrue at the rate of 1/80th of final pensionable earnings for each year of service. In addition, a lump sum equivalent to 3 years initial pension is payable on retirement. For Premium, benefits accrue at the rate of 1/60th 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 their 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 were not eligible to join.

Pension for those who moved into alpha from PCSPS will be made up of 2 portions: a portion from membership in the PCSPS (Classic, Premium, Classic Plus or Nuvos) to March 2015, and a portion from membership in alpha (from April 2015). Contribution rates for 2016/17 are shown in the table above.

In alpha, a member builds up a pension based on their 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 for alpha.

The partnership pension account is a stakeholder pension arrangement. The employer makes a basic contribution of between 8% and 14.75% (depending on the age of the member) into a stakeholder pension product chosen by the employee from a panel of providers. The employee does not have to contribute, but where they do make contributions, the employer will match these up to a limit of 3% of pensionable salary. Employers also contribute a further 0.5% of pensionable salary to cover the cost of centrally provided risk benefit cover (death in service and ill health retirement).

Further details about the Civil Service pension arrangements can be found at the website www.civilservicepensionscheme.org.uk

Directors' emoluments

This information is subject to and has been audited.

2016/17	Salaries £	Additional benefits £	Performance Related Payment £	LTIP payments made £	Pension benefits (xiv) £	Total emoluments £
Stephen Henwood (i)	155,833	-				155,833
Tom Smith (ii)	35,417	-				35,417
Ken McCallum (iii)	-	-				-
Volker Beckers (iv)	30,000	-				30,000
Evelyn Dickey (v)	32,500	-				32,500
Janet Ashdown (vi)	30,000	-				30,000
Rob Holden	25,000	-				25,000
John Clarke (vii)	274,924	55,000	-	32,570	74,367	436,861
David Batters (viii)	229,523	16,397	-	22,786	88,022	356,728
Pete Lutwyche (ix)	145,146	10,554	-	-	50,452	206,152
Adrian Simper (x)	191,663	12,000	-	14,376	71,146	289,185
David Peattie (xi)	25,833	4,810	-	-	-	30,643

2015/16	Salaries £	Additional benefits £	Performance Related Payment £	LTIP payments made £	Pension benefits (xiv) £	Total emoluments £
Stephen Henwood (i)	170,000	-				170,000
Janette Brown (xii)	30,141	-				30,141
Patrick Dixon (xiii)	30,141	-				30,141
Tom Smith (ii)	25,000	-				25,000
Ken McCallum (iii)	-	-				-
Volker Beckers (iv)	25,228	-				25,228
Evelyn Dickey (v)	31,250	-				31,250
Janet Ashdown (vi)	21,061	-				21,061
Rob Holden	20,833	-				20,883
John Clarke (vii)	273,030	60,000	109,212	47,727	103,615	593,584
David Batters (viii)	227,250	16,310	67,380	27,113	87,150	425,203
Pete Lutwyche (ix)	227,250	12,000	78,629	-	87,150	405,029
Adrian Simper (x)	166,650	15,193	50,328	19,092	92,756	344,019

(i) Term completed 28 February 2017

(ii) Appointed Chairman 1 March 2017. Remuneration £12,500 as Chairman for 1 month (March 2017), salary £150,000 per annum; remuneration £22,917 as Non-Executive Director for 11 months to 28 February 2017, and £25,000 for 2015/16

(iii) Ken McCallum does not receive any remuneration for his services to the board

(iv) Additional fees of £5,000 agreed for the role of Chair of the Audit and Risk Assurance Committee in June 2017, and retrospectively applied to 2016/17 (£5,000) and March 2015/16 (£228);

(v) Additional fees of £7,500 paid for the role of Chair of the Remuneration Committee in 2016/17 (£6,250 for 2015/16); subsequently approved by Government at £5,000; additional fee payable reduces to £5,000 from June 2017

(vi) Additional fees of £5,000 agreed for the role of Chair of the Safety and Security Committee in June 2017, and retrospectively applied to 2016/17 (£5,000) and March 2015/16 (£228);

(vii) Ceased to be CEO on 28 February 2017 but continued in employment as Special Advisor to the Board, maintaining the same salary and benefits. This arrangement is expected to end during 2017/18. Salary and benefits shown for 2016/17 cover his period of service as an Officer of the NDA for 11 months. Additional benefits for the 11 month period to the end of February were in respect of a London renting allowance of £44,000 and a car allowance of £11,000 (2015/16 £48,000 and £12,000 respectively). Pension benefits in 2016/17 comprised £55,315 within PCSPS / alpha (calculated in accordance with note (xiv) opposite) and £19,052 employer contribution to the Partnership Scheme (2015/16: PCSPS / alpha only). Full year figures for 2016/17 were: Salary £300,757; Additional benefits £60,000; Performance related payment £nil; LTIP payments £35,531; Pension benefits £78,177; Total £474,465

(viii) Additional benefits received were a car allowance of £12,000 and compensation for unused annual leave of £4,397 (2015/16: £12,000 and £4,310 respectively)

(ix) Resigned 31 October 2016. Additional benefits received were a car allowance of £7,000 (2015/16: £12,000) and compensation for unused annual leave of £3,534. Pension benefits in 2016/17 comprised £47,195 within PCSPS / alpha (calculated in accordance with note (xiv) below) and £3,257 employer contribution to the Partnership Scheme (2015/16: PCSPS / alpha only)

(x) Additional benefits received were a car allowance of £12,000 (2015/16: car allowance £12,000 and compensation for unused annual leave of £3,193)

(xi) Appointed 1 March 2017 (salary £310,000 per annum). Additional benefits received were a car allowance of £1,000 (£12,000 per annum) and a pension allowance of £3,810 (£45,720 per annum) in lieu of participation in the Civil Service Pension Arrangements

(xii) Term completed 4 March 2016; 2015/16 salary included additional fees of £6,875 for the role of Chair of the Audit and Risk Assurance Committee

(xiii) Term completed 4 March 2016; 2015/16 salary included additional fees of £6,875 for the role of Chair of the Safety and Security Committee

(xiv) Pension benefits within the PCSPS schemes and alpha 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 in accordance with HMG guidelines. See also notes (vii) and (ix) above.

Remuneration and Staff Report (continued)

Executive Directors' Pensions

	Real Increase in Pension during the year 2016/17 £000's	Accrued Pension at 31 March 2017 £000's	CETV at 31 March 2016 £000's	CETV at 31 March 2017 £000's	Real Increase in CETV Funded by Employer £000's
David Batters	5 – 7.5	30 – 35	315	383	42
John Clarke*	2.5 – 5	45 – 50	644	693	38
Pete Lutwyche**	2.5 – 5	10 – 15	138	170	23
Adrian Simper	2.5 – 5	65 – 70	952	1,034	32
David Peattie***	-	-	-	-	-

Notes:
The actuarial factors used to calculate CETVs were changed in 2016/17. The CETVs at 31/3/16 and 31/3/17 have both been calculated using the new factors, for consistency. The CETV at 31/3/16 therefore differs from the corresponding figure in last year's report which was calculated using the previous factors.

* Moved from alpha to Partnership Scheme 1 October 2016, ceased to be an Officer of NDA on 28 February 2017
** Moved from alpha to Partnership Scheme 1 October 2016, left the NDA 31 October 2016
*** Does not participate in the Civil Service Pension arrangements – see note (xi) to Directors' Emoluments

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 £98,879,264 (2016: £5,850).

Type of loss	2017 Total £	2017 Number of cases	2016 Total £	2016 Number of cases
Cash losses	-	-	-	-
Store losses	882,524	100+	-	-
Losses of pay, allowances and superannuation	-	-	-	-
Fruitless payments	67,315	121	5,850	50
Constructive losses	-	-	-	-
Claims waived or abandoned	-	-	-	-
Book-keeping losses	-	-	-	-
Failure to make adequate charges	-	-	-	-
Exchange rate fluctuation losses	-	-	-	-
Special payments	97,929,425	2	-	-
Total	98,879,264		5,850	

A contract loss provision in respect of potentially onerous commercial contracts with foreign countries to reprocess fuel is included within other provisions (note 25 to accounts) and is not included in the losses disclosed above.

Stores losses relate to the write off of stores items on licensed sites.

There were 2 special payments recorded in the year. One related to the settlement of a tribunal case for £583,540 and the other to settlement of legal action arising from the Magnox PBO competition for £97,345,885 (see below). There were no special payments in 2016.

Type of loss	2017 Total £	2017 Number of cases	2016 Total £	2016 Number of cases
Compensation payments	97,929,425	2	-	-
Extra-contractual	-	-	-	-
Total	97,929,425	-	-	-

Magnox PBO Competition Litigation Costs	2017 Total £			
EnergySolutions settlement	85,000,000			
Bechtel settlement	12,345,885			
Total	97,345,885			

Parliamentary Accountability Disclosures (continued)

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 2017 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.

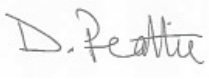
Whilst not the lead employer, the NDA is the lead organisation and has ultimate responsibility for certain nuclear industry pension schemes, including the Combined Nuclear Pension Plan, the Magnox section of the ESPS, and the GPS Pension Scheme. Provisions for known deficits are included within Nuclear Provisions. 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.

On 29 March 2017, the UK Government submitted its notification to leave the EU in accordance with Article 50. The triggering of Article 50 starts a 2 year negotiation process between the UK and the EU.

Any subsequent changes in legislation, regulation and funding arrangements are subject to the outcome of the negotiations. As a result, an unquantifiable remote contingent liability is disclosed. In accordance with accounting standards, no contingent assets can be recognised. During this 2 year period, which includes the full duration of the next accounting period, the UK remains a full member of the EU with all the rights and obligations arising from membership. There are no significant impacts on the financial statements in the short-term from making the formal notification.

International Carrier Bond
During 2014/15 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.



David Peattie
Accounting Officer and Chief Executive Officer
11 July 2017

Audit Report of the Comptroller and Auditor General

I have audited the financial statements of the Nuclear Decommissioning Authority for the year ended 31 March 2017 under the Energy Act 2004. The financial statements comprise: the Group and Authority Statements of Comprehensive Net Expenditure, 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 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 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 group's and of the Nuclear Decommissioning Authority's affairs as at 31 March 2017 and of the group's and the Authority's net expenditure after taxation 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 24 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 the current assumptions adopted by the Authority.

Opinion on other matters
In my opinion:
- the parts of the 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.

Sir Amyas C E Morse
Comptroller and Auditor General
13 July 2017

Accounts and other information

Annual Accounts

Consolidated Statement of Comprehensive Net Expenditure
for the year ended 31 March 2017

	note	2017 £m	2016 £m
Expenditure			
Authority administration expenditure	5	**41**	38
Programme expenditure	6	**3,519**	3,531
Adjustments to provisions	7	**2,013**	89,412
Depreciation and impairment	8	**104**	74
		5,677	93,055
Income	9	**(988)**	(1,020)
Net expenditure before interest and taxation		**4,689**	92,035
Interest receivable		**(28)**	(1)
Interest payable		**4**	2
Net interest payable on defined benefit pension schemes	26	**6**	1
Net expenditure before taxation		**4,671**	92,037
Taxation	10	**1**	-
Net expenditure after taxation		**4,672**	92,037
Other comprehensive expenditure / (income):			
Deficit / (surplus) deficit arising on revaluation of Property, Plant and Equipment	11	**1**	(19)
Net recognised loss / (gain) on defined benefit pension schemes	26	**398**	(9)
Total comprehensive net expenditure for the year		**5,071**	92,009

The related notes numbered 1 to 31 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 2017

	note	2017 £m	2016 £m
Expenditure			
Authority administration expenditure	5	**41**	38
Programme expenditure	6	**3,481**	3,525
Adjustments to provisions	7	**2,431**	89,412
Depreciation and impairment	8	**81**	53
		6,034	93,028
Income	9	**(961)**	(985)
Net expenditure before interest and taxation		**5,073**	92,043
Interest receivable		**(1)**	(1)
Interest payable		**–**	–
Net expenditure before taxation		**5,072**	92,042
Taxation	10	**1**	–
Net expenditure after taxation for the year		**5,073**	92,042
Other comprehensive expenditure / (income):			
Deficit / (surplus) arising on revaluation of Property, Plant and Equipment	11	**1**	(19)
Actuarial loss / (gain) on defined benefit pension schemes	26	**14**	(7)
Total comprehensive net expenditure for the year		**5,088**	92,016

The related notes numbered 1 to 31 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 2017

	note	2017 £m	2016 £m
Non-current assets			
Property, plant and equipment	11	**906**	865
Recoverable contract costs	14	**2,870**	2,799
Finance lease receivables	20	**45**	45
Trade and other receivables	21	**41**	40
Total non-current assets		**3,862**	3,749
Current assets			
Inventories	16	**76**	78
Other investments	19	**356**	336
Finance lease receivables	20	**2**	1
Trade and other receivables	21	**224**	165
Cash and cash equivalents	22	**135**	154
Total current assets		**793**	734
Total assets		**4,655**	4,483
Current liabilities			
Trade and other payables	23	**(1,615)**	(1,473)
Nuclear provisions	24	**(3,025)**	(2,880)
Other provisions	25	**(176)**	(208)
Total current liabilities		**(4,816)**	(4,561)
Total assets less current liabilities		**(161)**	(78)
Non-current liabilities			
Trade and other payables	23	**(1,416)**	(1,431)
Nuclear provisions	24	**(160,480)**	(157,792)
Other provisions	25	**(457)**	(1,255)
Defined benefit pension scheme deficits	26	**(674)**	(5)
Total non-current liabilities		**(163,027)**	(160,483)
Net liabilities		**(163,188)**	(160,561)
Taxpayers' equity			
Revaluation reserve		**76**	77
General reserve		**(163,266)**	(160,640)
Total taxpayers' equity		**(163,190)**	(160,563)
Non-controlling interests	27	**2**	2
Total equity		**(163,188)**	(160,561)

The financial statements on pages 64 to 103 were approved by the Board and signed on its behalf by

David Peattie
Chief Executive and Accounting Officer
11 July 2017

The related notes numbered 1 to 31 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 2017

	note	2017 £m	2016 £m
Non-current assets			
Property, plant and equipment	11	**500**	530
Investments in subsidiaries	13	**229**	229
Recoverable contract costs	14	**2,870**	2,799
Finance lease receivables	20	**45**	45
Trade and other receivables	21	**41**	40
Total non-current assets		**3,685**	3,643
Current assets			
Inventories	16	**33**	42
Finance lease receivables	20	**2**	1
Trade and other receivables	21	**426**	397
Cash and cash equivalents	22	**69**	62
Total current assets		**530**	502
Total assets		**4,215**	4,145
Current liabilities			
Trade and other payables	23	**(1,546)**	(1,423)
Nuclear provisions	24	**(3,023)**	(2,878)
Other provisions	25	**(172)**	(207)
Total current liabilities		**(4,741)**	(4,508)
Total assets less current liabilities		**(526)**	(363)
Non-current liabilities			
Trade and other payables	23	**(1,416)**	(1,424)
Nuclear provisions	24	**(160,975)**	(157,715)
Other provisions	25	**(431)**	(1,228)
Defined benefit pension scheme deficits	26	**(15)**	(1)
Total non-current liabilities		**(162,837)**	(160,368)
Net liabilities		**(163,363)**	(160,731)
Taxpayers' equity			
Revaluation reserve		**51**	52
General reserve		**(163,414)**	(160,783)
Total taxpayers' equity		**(163,363)**	(160,731)

The financial statements on pages 64 to 103 were approved by the Board and signed on its behalf by

David Peattie
Chief Executive and Accounting Officer
11 July 2017

The related notes numbered 1 to 31 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 2017

		NDA Group		Authority	
		2017	2016	**2017**	2016
	note	**£m**	Restated £m	**£m**	Restated £m
Cash flows from operating activities					
Net expenditure after taxation for the year	SoCNE	**(4,672)**	(92,037)	**(5,073)**	(92,042)
Adjustments for:					
Interest receivable	4	**(28)**	(1)	**(1)**	(1)
Dividend income from subsidiary	9	**–**	–	**(25)**	(10)
Interest payable	4	**4**	2	**–**	–
Net interest payable on defined benefit pension schemes	26	**6**	1	–	–
Excess of pension service costs over cash contributions paid		**44**	(1)	**–**	–
Depreciation of property, plant and equipment	11	**65**	60	**42**	42
Impairment of property, plant and equipment	11	**39**	14	**39**	11
Revalorisation of advance payments	23	**176**	87	**176**	87
Amortisation of recoverable contract costs	14	**203**	243	**203**	243
Decrease / (increase) in inventories	16	**2**	(18)	**9**	(4)
(Increase) / decrease in receivables		**(50)**	63	**(20)**	53
Decrease in payables		**(179)**	(192)	**(196)**	(180)
Increase in nuclear provisions impacting net expenditure	7	**3,120**	88,981	**3,539**	88,981
(Decrease) / (increase) in other provisions impacting net expenditure	7	**(1,107)**	431	**(1,108)**	431
Net cash outflow from operating activities		**(2,377)**	(2,367)	**(2,415)**	(2,389)
Cash flows from investing activities					
Interest received	4	**28**	1	**1**	1
Dividend received from subsidiary	9	**–**	–	**25**	10
Dividend paid to outgoing PBO		**(12)**	–	**–**	–
Interest paid	4	**(4)**	(2)	**–**	–
Proceeds on disposal of property, plant and equipment	11	**3**	7	**–**	2
Purchases of property, plant and equipment	11	**(85)**	(59)	**(52)**	(49)
(Purchase) / disposal of investments	19	**(20)**	46	**–**	–
Net cash (outflow) from investing activities		**(90)**	(7)	**(26)**	(36)
Cash flow from financing activities					
Grants from parent department	SoCTE	**3,210**	3,295	**3,210**	3,295
Surrender of receipts to Consolidated Fund	SoCTE	**(762)**	(935)	**(762)**	(935)
Net cash inflow from financing activities		**2,448**	2,360	**2,448**	2,360
Net increase / (decrease) in cash and cash equivalents		**(19)**	(14)	**7**	(65)
Cash and cash equivalents at beginning of period	22	**154**	168	**62**	127
Cash and cash equivalents at end of period		**135**	154	**69**	62

Statement of Changes in Taxpayers' Equity
for the year ended 31 March 2017

NDA Group	General £m	Revaluation £m	Total £m
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
Amounts surrenderable to Consolidated Fund (a)	(935)	–	(935)
Actuarial gain on defined benefit pension schemes	9	–	9
Net expenditure	(92,037)	–	(92,037)
Balance at 31 March 2016	(160,640)	77	(160,563)
Adjustment relating to previous period	2	–	2
Deficit arising on revaluation of PPE	–	(1)	(1)
Gross grants from parent department	3,210	–	3,210
Amounts surrenderable to Consolidated Fund (a)	(756)	–	(756)
Actuarial loss on defined benefit pension schemes	(398)	–	(398)
Dividend paid to outgoing PBO to Sellafield Ltd	(12)	–	(12)
Net expenditure	(4,672)	–	(4,672)
Balance at 31 March 2017	(163,266)	76	(163,190)

Authority	General £m	Revaluation £m	Total £m
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
Amounts surrenderable to Consolidated Fund (a)	(935)	–	(935)
Actuarial gain on defined benefit pension schemes	7	–	7
Net expenditure	(92,042)	–	(92,042)
Balance at 31 March 2016	(160,783)	52	(160,731)
Adjustment relating to previous period	2	–	2
Deficit arising on revaluation of PPE	–	(1)	(1)
Gross grants from parent department	3,210	–	3,210
Amounts surrenderable to Consolidated Fund (a)	(756)	–	(756)
Actuarial loss on defined benefit pension schemes	(14)	–	(14)
Net expenditure	(5,073)	–	(5,073)
Balance at 31 March 2017	(163,414)	51	(163,363)

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 £756 million (2016: £935 million) included £11 million payable as at 31 March 2017. (2016: £17 million at 31 March 2016). This amount was included within current trade and other payables in the Statement of Financial Position of Group and Authority at 31 March 2017. The amount paid in cash in the year was £762 million (2016: £934 million)
(b) The £2 million credit adjustment to the general reserve in 2017 represents the net effect of a £11 million debit to trade receivables and a £9 million credit to payments received on account (note 23).

Notes to the financial statements
for the year ended 31 March 2017

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 BEIS. The NDA was created with the primary objective of overseeing and monitoring the decommissioning and clean-up of the UK's civil nuclear legacy. Pages 16 to 29 provide 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 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 2017 shows net liabilities of £163 billion (2016: £161 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, BEIS. 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 2017/2018, taking into account the amounts required to meet the NDA's liabilities falling due in this year, have already been included in BEIS's estimates, and these have been approved by Parliament. There is no reason to believe that future BEIS 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
No new or revised standards were adopted during the year.

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

The Authority expects that the introduction of IFRS 16 is likely to result in a material increase to non-current assets and current / non-current liabilities for both Authority and NDA Group, resulting from essentially bringing into the Statement of Financial Position the Authority's / Group's operating lease commitments as lessee (see note 28 a). The Authority does not expect that the adoption of IFRS 9 or IFRS 15 will have a material impact on the financial statements of the NDA Group.

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. Sellafield Ltd became a subsidiary of NDA on 1 April 2016 (see note 13), and was consolidated for the first time in the current reporting period. Prior period figures have not been restated.

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 received to date, the balance is shown under non-current assets as recoverable contract costs. Where amounts received 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
There were no finance lease payables in either NDA Authority or NDA Group at 31 March 2016 or 31 March 2017.

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.

Notes to the financial statements (continued)

2. Statement of significant accounting policies (continued)

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. Non-monetary 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. Any amounts recoverable from third parties are recognised as separate assets. 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 and alpha pension schemes can be found within the Remuneration and Staff Report on pages 48 to 58.

2.9 Research and development expenditure

Expenditure on research activities 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.

Assets on designated nuclear sites are only recognised where 2 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 to commercial activity should exceed 10%.

With effect from 1 April 2016 assets on non-designated sites are only recognised where their value exceeds £10,000 (previously £2,000). The change brings the NDA policy in line with that of BEIS as the sponsoring department.

Existing assets below the new capitalisation threshold have been written out during the year.

The effect of this change in policy on the 2016/17 accounts is negligible and no restatement of the 2015/16 numbers is required.

In line with the accounts direction issued by the Secretary of State, 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.

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.

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:

Land	Not depreciated
Buildings	10 to 60 years
IT equipment	3 years
Fixtures and fittings	3 to 10 years
Plant and equipment	10 to 30 years
Transport equipment	4 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.

Notes to the financial statements (continued)

2. Statement of significant accounting policies (continued)

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 uranic material is held at nil value, pending development of long-term options and cost estimates for disposition of this material, and is disclosed as a contingent liability in note 29.

2.15 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.

2.15 (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.

2.15(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.

Notes to the financial statements (continued)

2. Statement of significant accounting policies (continued)

De-recognition of financial liabilities
Financial liabilities are derecognised when, and only when, the Group's obligations are discharged, cancelled or they expire.

2.15 (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.

2.16 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 2016/17 accounts are:

- Short-term rate: between 0 and up to and including 5 years, -2.70% per annum (2015/16: -1.55%)
- Medium-term rate: after 5 and up to and including 10 years, -1.95% per annum (2015/16: -1.00%)
- Long-term rate: exceeding 10 years, -0.80% per annum (2015/16: -0.80%)

Provision movement expenditure in the statement of comprehensive net expenditure includes the adjustments necessary to unwind 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 described above.

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

2.18 Contractor costs
Contractor costs are defined as payments to contractors relating to the core NDA programme (work performed on behalf of NDA by contractors) adjusted to eliminate payments made between those contractors. Contractor costs are recognised as an expense under programme expenditure within the Statement of Comprehensive Net Expenditure, in the period to which they relate.

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 £906 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 focused in particular on the first 20 years, which represents £53 billion out of the total £164 billion provision (2016: £51 billion out of £161 billion). In undiscounted terms it represents £47 billion out of a total of £119 billion (2016: £47 billion out of £117 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:

Notes to the financial statements (continued)

3. Critical accounting judgements and key sources of estimation uncertainty (continued)

- 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.

UK government proposed a preliminary policy view to pursue reuse of UK civil separated plutonium subject to a suitable business case. NDA are continuing to develop options capable of delivering the policy objective of putting the plutonium beyond reach including disposal and reuse option. Following review of the likely costs of the preliminary policy, and the credible alternative of storage and disposal in the long-term, a prudent estimate of £7.7 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 according to activity type. The segmental analysis in the following table presents the net expenditure for each of the continuing operations.

NDA Group 2017	Sellafield reprocessing and transport £m	Magnox electricity generation and research sites £m	Dounreay site restoration £m	Waste management £m	Springfields and Capenhurst £m	NDA admin and other non-programme £m	Subsidiaries and Group adjustments £m	**Total 2017 £m**
Authority administration expenditure	–	–	–	–	–	41	–	**41**
Programme expenditure	2,384	520	215	106	77	179	38	**3,519**
Decommissioning costs charged to nuclear provision	(1,674)	(659)	(177)	(47)	(79)	–	–	**(2,636)**
Decommissioning costs charged to other provisions	(143)	–	–	–	–	–	–	**(143)**
Nuclear Provision increase/(decrease)	4,348	1,058	161	538	70	–	(419)	**5,756**
Other provisions increase/(decrease)	(965)	–	–	–	–	–	1	**(964)**
Adjustments to provisions	1,566	399	(16)	491	(9)	–	(418)	**2,013**
Depreciation and impairment	81	–	–	–	–	–	23	**104**
Income (a)	(906)	(14)	(2)	(5)	–	(34)	(27)	**(988)**
Interest payable	–	–	–	–	–	–	10	**10**
Interest receivable	–	–	–	–	–	(1)	(27)	**(28)**
Net expenditure / (income) from continuing operations for the year before taxation	3,125	905	197	592	68	185	(401)	**4,671**

(a) see note 9 for commentary on major customers

NDA Group 2016	Sellafield reprocessing and transport £m	Magnox electricity generation and research sites £m	Dounreay site restoration £m	Waste management £m	Springfields and Capenhurst £m	NDA admin and other non-programme £m	Subsidiaries and Group adjustments £m	Total 2016 £m
Authority administration expenditure	–	–	–	–	–	38	–	38
Programme expenditure	2,328	673	192	93	76	163	6	3,531
Decommissioning costs charged to nuclear provision	(1,625)	(723)	(173)	(45)	(71)	–	–	(2,637)
Decommissioning costs charged to other provisions	(168)	–	–	–	(2)	–	–	(170)
Nuclear Provision increase/(decrease)	64,041	15,537	492	10,496	1,052	–	–	91,618
Other provisions increase/(decrease)	600	–	–	–	–	1	–	601
Adjustments to provisions	62,848	14,814	319	10,451	979	1	–	89,412
Depreciation and impairment	53	–	–	–	–	–	21	74
Income (a)	(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 before taxation	64,442	15,362	509	10,540	1,055	134	(5)	92,037

(a) see note 9 for commentary on major customers

Notes to the financial statements (continued)

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

	2017 £m	2016 £m
United Kingdom	**704**	821
Germany	**37**	28
Japan	**136**	120
Other countries	**111**	51
Total income	**988**	1,020

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

5. Authority administration expenditure

Authority	2017 £m	2016 £m
Staff costs (see Remuneration and Staff Report)	**25**	24
Administration costs	**12**	12
Rentals under operating leases – other	**4**	2
Auditors' remuneration	**–**	–
	41	38

Directors' emoluments are included in the above figures and can be seen in the Remuneration and Staff Report on pages 48 to 58.

Auditors' remuneration represents fees payable to the NAO for the audit of the Authority and the NDA Group and amounted to £350,000 (2016: £370,000). No other remuneration has been paid to the NAO.

6. Programme expenditure

	NDA Group		Authority	
NDA Group & Authority	2017 £m	2016 £m	2017 £m	2016 £m
Contractor and subsidiary costs (a), (b)	**2,912**	3,013	**2,887**	2,965
Amortisation of rec contract costs (see note 14)	**203**	243	**203**	243
Revalorisation of advance payments (see note 23)	**176**	87	**176**	87
Litigation costs	**106**	–	**106**	–
Fees payable to SLCs	**56**	106	**56**	106
Trading costs	**37**	50	**37**	50
Rentals under operating leases – other	**15**	9	**–**	–
Pension deficit repair payment	**15**	–	**15**	–
Research and development costs	**9**	9	**5**	6
Insurance	**9**	7	**15**	15
Skills and socio-economic development programme	**3**	2	**3**	2
Release of fees previously accrued	**(33)**	–	**(33)**	–
Other costs	**11**	5	**11**	51
Programme expenditure	**3,519**	3,531	**3,481**	3,525

(a) Contractor and subsidiary costs shown are after deduction for capitalisation of £35 million (2016: £49 million) as property, plant and equipment, and deduction for payments between contractors.
(b) Contractor and subsidiary costs include auditors' remuneration payable for the audit of the NDA subsidiary companies amounting to £269,211 (2016: £141,594). Note that the 2017 figure includes the audit fee in respect of Sellafield Ltd which became a subsidiary on 1 April 2016 and was consolidated with effect from this date. The prior period was not restated, and so the 2016 figure does not include any fee in respect of this.

7. Adjustments to provisions

NDA Group & Authority	NDA Group 2017 £m	NDA Group 2016 £m	Authority 2017 £m	Authority 2016 £m
Movement in nuclear provisions:				
Provided for in the year (see note 24)	**7,406**	90,209	**7,406**	90,209
In-year group provision adjustment (see note 24)	**(419)**	–	–	–
Unwinding of discount (see note 24)	**(1,231)**	1,409	**(1,231)**	1,409
	5,756	91,618	**6,175**	91,618
Release of provision (see note 24)	**(2,636)**	(2,637)	**(2,636)**	(2,637)
	3,120	88,981	**3,539**	88,981
Movement in other provisions:				
Provided for in the year (see note 25)	**(946)**	599	**(947)**	599
Unwinding of discount (see note 25)	**(18)**	2	**(18)**	2
	(964)	601	**(965)**	601
Release of provision (see note 25)	**(143)**	(170)	**(143)**	(170)
	(1,107)	431	**(1,108)**	431
Total provisions movement	**2,013**	89,412	**2,431**	89,412

8. Depreciation and impairment

NDA Group & Authority	NDA Group 2017 £m	NDA Group 2016 £m	Authority 2017 £m	Authority 2016 £m
Depreciation of PPE (see note 11)	**65**	60	**42**	42
Impairment of PPE (see notes 11, 13)	**39**	14	**39**	11
	104	74	**81**	53

9. Income

NDA Group & Authority	NDA Group 2017 £m	NDA Group 2016 £m	Authority 2017 £m	Authority 2016 £m
Reprocessing and transport, waste management and storage (a), (b), (c)	**951**	831	**914**	792
Energy trading (c)	**14**	123	**14**	123
Gain on bargain purchase (d)	**12**	–	–	–
Sundry	**5**	9	**2**	4
Rental income	**2**	3	**2**	1
Admin / non-programme	**4**	54	**4**	55
Dividend from subsidiary	**–**	–	**25**	10
	988	1,020	**961**	985

(a) Revenue from spent fuel reprocessing, waste and product storage and the transportation of spent fuel, waste and products.
(b) The policy regarding the treatment of transactions between Group entities is as given in note 30.
(c) Revenues from transactions with EdF amounted to more than 10% of total revenues in the year, being £14 million (2016: £123 million) for electricity generation activities and £593 million (2016: £570 million) for reprocessing and the management of spent fuel and waste included in (a). The income from EdF included in (a) relates to long-term contracts for which around half of the cash has already been received by NDA. In addition, an arrangement is in place with the sponsoring department, BEIS, whereby it pays NDA directly in respect of one of the long-term contracts. As such, the residual risk resulting from reliance upon EdF as a key customer is not considered to be significant.
(d) On 1 April 2016, 100% of the issued share capital of Sellafield Ltd was acquired by NDA from Nuclear Management Partners (NMP) for £1. Net assets at that date were £12m, giving rise to a gain on bargain purchase of £12m. A corresponding dividend payment of £12m was then made to NMP during the year (see Statement of Changes in Taxpayers' Equity for NDA Group)

Notes to the financial statements (continued)

10. Tax

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

NDA Group & Authority	2017 £m	2016 £m
NDA Group net expenditure before tax	**4,671**	92,037
Deficit on ordinary activities before tax at the UK standard rate of corporation tax of 20% (2016: 20%)	**934**	18,407
Effects of:		
Income and expenditure which is not taxable or tax deductible	**(755)**	(18,231)
Capital allowances for the year in excess of depreciation	**111**	103
Unutilised losses	**(290)**	(279)
Current tax charge for the year	**–**	–
Diverted Profits Tax	**1**	–
Deferred tax release	**–**	–
Total tax charge / (credit)	**1**	–

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. The NDA is liable for Diverted Profits Tax on the activities of Rutherford Indemnity Limited, NDA's wholly owned captive insurance company based in Guernsey.

11. Property, plant and equipment

NDA Group 2017	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
Cost or valuation							
At 1 April 2016	67	2,119	5	4,748	57	179	7,175
Revaluations	(2)	1	–	–	–	–	(1)
Additions	–	–	–	–	2	83	85
Eliminations (e)	–	–	–	(158)	–	–	(158)
Other reclassifications (f)	–	22	–	77	–	(31)	68
Disposals	–	–	–	–	(8)	–	(8)
Impairment (c)	(3)	(7)	–	(16)	–	(22)	(48)
At 31 March 2017	**62**	**2,135**	**5**	**4,651**	**51**	**209**	**7,113**
Depreciation							
At 1 April 2016	–	(2,066)	(4)	(4,215)	(25)	–	(6,310)
Adjustment relating to previous period	–	–	–	(4)	–	–	(4)
Charged in year	–	(3)	–	(57)	(5)	–	(65)
Eliminations (e)	–	–	–	158	–	–	158
Disposals	–	–	–	–	5	–	5
Impairment (c)	–	6	–	3	–	–	9
At 31 March 2017	**–**	**(2,063)**	**(4)**	**(4,115)**	**(25)**	**–**	**(6,207)**
Net book value at 31 March 2016	67	53	1	533	32	179	865
Net book value at 31 March 2017	**62**	**72**	**1**	**536**	**26**	**209**	**906**

The net book value of plant and equipment at 31 March 2017 (£536 million) includes £283 million relating to future decommissioning costs.

11. Property, plant and equipment (continued)

NDA Group 2016	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
Cost or valuation							
At 1 April 2015	54	2,118	7	4,848	54	167	7,248
Revaluations	17	–	–	–	–	2	19
Additions	–	–	–	–	–	59	59
Eliminations (e)	–	–	(2)	(136)	–	–	(138)
Other reclassifications (f)	–	1	–	44	9	(41)	13
Disposals	(4)	–	–	–	(6)	–	(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 (e)	–	–	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 and equipment at 31 March 2016 (£533 million) includes £228 million relating to future decommissioning costs.

Authority 2017	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
Cost or valuation							
At 1 April 2016	63	2,068	3	4,337	4	172	6,647
Revaluations	(2)	1	–	–	–	–	(1)
Additions	–	–	–	–	–	52	52
Eliminations (e)	–	–	–	(158)	–	–	(158)
Other reclassifications (f)	–	–	–	5	–	(5)	–
Impairment (c)	(3)	–	–	(17)	–	(22)	(42)
At 31 March 2017	**58**	**2,069**	**3**	**4,167**	**4**	**197**	**6,498**
Depreciation							
At 1 April 2016	–	(2,061)	(3)	(4,052)	(1)	–	(6,117)
Charged in year	–	(3)	–	(39)	–	–	(42)
Eliminations (e)	–	–	–	158	–	–	158
Impairment (c)	–	–	–	3	–	–	3
At 31 March 2017	**–**	**(2,064)**	**(3)**	**(3,930)**	**(1)**	**–**	**(5,998)**
Net book value at 31 March 2016	63	7	–	285	3	172	530
Net book value at 31 March 2017	**58**	**5**	**–**	**237**	**3**	**197**	**500**

The net book value of plant and equipment at 31 March 2017 (£237 million) includes £137 million relating to future decommissioning costs.

Notes to the financial statements (continued)

11. Property, plant and equipment (continued)

Authority 2016	Land £m	Buildings £m	Fixtures and fittings £m	Plant and 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 (e)	–	–	(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 (e)	–	–	2	136	–	–	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 and equipment at 31 March 2016 (£285 million) includes £150 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 2017 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 (6th Edition) by GVA Grimley Ltd Chartered Surveyors.

(c) The impairment charge to expenditure of £39 million (2016: £14 million) relates to commercial assets at Sellafield, of which £38 million resulted from changes to cost allocation used in determining economic asset values.

(d) Contracted capital commitments relating to those economic assets expected to be subsequently capitalised, were £20 million (2016: £22 million).

(e) During the year NDA eliminated fully depreciated assets no longer performing commercial activity, which had a gross book value and accumulated depreciation of £158 million (2016: £138 million).

(f) 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 £68 million was recognised in the year (2016: £13 million increase), see note 24.

12. Intangible assets

Intangible assets had no economic value at 31 March 2017 and 31 March 2016.

13. Investments in subsidiaries

Authority	2017 £m	2016 £m
Cost		
At 1 April	**229**	229
Additions	**–**	–
At 31 March	**229**	229
Impairment		
At 1 April	**–**	–
Reversal	**–**	–
At 31 March	**–**	–
Net book value at 1 April	**229**	229
Net book value at 31 March	**229**	229

Details of the Authority's subsidiaries at 31 March 2017 are as follows:

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

(i) Ownership through INS Ltd.
(ii) On 1 April 2016 100% of the issued share capital of Sellafield Ltd was acquired by NDA from Nuclear Management Partners (NMP) for £1.

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.

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 Ltd, 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 £100.

NDA is a member of Energy Coast West Cumbria Ltd, a company limited by guarantee registered in the UK and contributing to the economic regeneration of west Cumbria. NDA's liability is limited to £1.

Notes to the financial statements (continued)

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	2017 £m	2016 £m
Recoverable contract costs relating to Nuclear Provisions:		
Gross recoverable contract costs	**6,885**	7,222
Less applicable payments received on account (see note 23)	**(3,445)**	(3,577)
Less associated contract loss provisions (see note 25)	**(570)**	(846)
	2,870	2,799

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

	2017			2016		
NDA Group and Authority	Historic costs £m	Future costs £m	Total costs £m	Historic costs £m	Future costs £m	Total costs £m
Balance as at 1 April	**2,214**	**5,008**	**7,222**	2,457	3,204	5,661
Increase in year (see note 24)	–	**174**	**174**	–	2,072	2,072
Unwind of discount (see note 24)	**–**	**(42)**	**(42)**	–	35	35
Amortisation (see note 6)	**(203)**	**–**	**(203)**	(243)	–	(243)
Release in year (see note 24)	**–**	**(266)**	**(266)**	–	(303)	(303)
Balance as at 31 March	**2,011**	**4,874**	**6,885**	2,214	5,008	7,222

15. Deferred taxation

Deferred tax liability not recognised

There were no unrecognised deferred tax liabilities at 31 March 2017 or 31 March 2016.

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:

NDA Group	2017 £m	2016 £m
Tax losses	**1,054**	871
Accelerated capital allowances	**530**	485
Intangibles	**7**	7
Short term timing differences	**2**	7
Deferred tax asset at UK standard rate of Corporation Tax for 2017 of 20% (2016: 20%)	**1,593**	1,370

The UK standard rate of Corporation Tax decreased from 20% to 19% on 1 April 2017. 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 2017 as a result of the future changes in the standard rate of Corporation Tax.

16. Inventories

	NDA Group		Authority	
	2017 £m	2016 £m	2017 £m	2016 £m
Raw materials and consumables	**40**	51	**33**	42
Work-in-progress	**36**	27	**–**	–
	76	78	**33**	42

The cost of raw materials and consumables recognised as an expense in the year was £72 million in Authority (2016: £100 million) and £78 million in NDA Group (2016: £107 million).

Work-in–progress recognised as an expense in the year in both Authority and NDA Group was £9 million (2016: nil).

17. Financial instruments by category

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

		NDA Group		Authority	
	note	**2017 £m**	2016 £m	**2017 £m**	2016 £m
Financial assets					
Fair value through profit or loss (FVTPL):					
Other investments	19	**356**	336	**–**	–
Loans and receivables:					
Non-current finance lease receivable	20	**45**	45	**45**	45
Non-current other receivables	21	**10**	9	**10**	9
Current trade and other receivables (a)	21	**128**	86	**334**	323
Current finance lease receivables	20	**2**	1	**2**	1
Cash and cash equivalents	22	**135**	154	**69**	62
		676	631	**460**	440

		NDA Group		Authority	
	note	**2017 £m**	2016 £m	**2017 £m**	2016 £m
Financial liabilities					
Fair value through profit or loss (FVTPL):					
Current trade and other payables (b)	23	**(827)**	(753)	**(818)**	(718)
		(827)	(753)	**(818)**	(718)

(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 2.15.

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. 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 BEIS.

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 2017 (2016: £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.

Notes to the financial statements (continued)

18. 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 largely from reprocessing and spent fuel and waste management contracts. 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.

Following the cessation of generation at Wylfa during 2015/16 and the resultant fall in energy trading income, this risk in relation to electricity prices is no longer considered to be significant.

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 ongoing monitoring of the aging of receivables. The Authority's contracts are almost entirely reprocessing and spent fuel and waste management contracts, for which NDA is not taking on any new customers.

No sensitivity analysis has been performed in respect of any of the above risk areas, due to immateriality.

19. Other investments

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Investments carried at fair value:				
Bank deposits	**39**	42	**–**	–
Managed investments	**317**	294	**–**	–
	356	336	**–**	–

Other investments include funds held within Rutherford Indemnity Ltd in order to allow it to provide insurance for assets across the NDA estate.

20. Finance lease receivables

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £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**	178	**178**	178
	185	185	**185**	185
Less: unearned finance income	**(138)**	(139)	**(138)**	(139)
Present value of minimum lease payments receivable	**47**	46	**47**	46

20. Finance lease receivables (continued)

	Present value of minimum lease payments			
	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Amounts receivable under finance leases:				
Not later than 1 year	**2**	1	**2**	1
Later than 1 year and not later than 5 years	**6**	6	**6**	6
Later than 5 years	**39**	39	**39**	39
Present value of minimum lease payments receivable	**47**	46	**47**	46

	Present value of minimum lease payments			
	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Of which:				
Non-current assets	**45**	45	**45**	45
Current assets	**2**	1	**2**	1
Present value of minimum lease payments receivable	**47**	46	**47**	46

The finance lease receivable relates to:

(a) Land and buildings of the Springfields Fuels operation which was disposed of to Westinghouse Electric UK Holdings Ltd 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 re-pledge 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.

21. Trade and other receivables

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Non-current:				
Prepayments	**31**	31	**31**	31
Other receivables	**10**	9	**10**	9
	41	40	**41**	40
Current:				
Trade receivables	**66**	29	**287**	282
Less: allowance for doubtful debts	**–**	–	**–**	–
	66	29	**287**	282
Accrued income	**44**	39	**44**	30
Other receivables	**18**	18	**3**	11
	128	86	**334**	323
Prepayments	**8**	7	**5**	3
VAT	**88**	72	**87**	71
	224	165	**426**	397

Notes to the financial statements (continued)

21. Trade and other receivables (continued)

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 2017. 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

During the year NDA sold the majority of the power generated to EdF Energy under the terms of a bilateral trading contract, with a small amount also being traded by EdF Energy on NDA's behalf and ultimately being sold to third party customers. With effect from February 2017 all power is sold directly to EdF Energy under the terms of a new trading contract. Due to the relatively low volume of electricity now generated, and the terms of the new contract, the related credit risk is considered negligible.

There exists a limited level of credit risk in respect of reprocessing and spent fuel and waste management 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 £4 million (2016: £5 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:

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Neither impaired nor past due	**62**	24	**286**	282
Not impaired but past due in the following periods:				
Within 30 days	**3**	4	**–**	–
31 to 60 days	**–**	1	**–**	–
61 to 90 days	**–**	–	**–**	–
91 to 120 days	**–**	–	**–**	–
Over 120 days	**1**	–	**1**	–
Total	**66**	29	**287**	282

There was no allowance for doubtful debts made at 31 March 2017 or 31 March 2016, in NDA Group or Authority.

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.

22. Cash and cash equivalents

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Balance at 1 April	**154**	168	**62**	127
Net change in cash and cash equivalent balances	**(19)**	(14)	**7**	(65)
Balance at 31 March	**135**	154	**69**	62
The balances at 31 March were held at:				
Commercial banks	**60**	85	**–**	–
Government Banking Service	**75**	69	**69**	62
	135	154	**69**	62

Cash and cash equivalents comprise cash and short term bank deposits with an original maturity of 3 months or less.

23. Trade and other payables

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Current:				
Trade payables	**203**	174	**247**	167
Receipts to surrender to the Consolidated Fund	**11**	17	**11**	17
Other payables	**2**	4	**1**	1
Accruals	**611**	558	**559**	533
	827	753	**819**	718
Other taxes and social security	**48**	2	**1**	–
Payments received on account	**725**	700	**719**	695
Deferred income	**15**	18	**8**	10
	1,615	1,473	**1,546**	1,423
Non-current:				
Payments received on account	**1,416**	1,425	**1,416**	1,424
Other payables	**–**	6	**–**	–
	1,416	1,431	**1,416**	1,424

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Movements on gross payments received on account				
Balance at 1 April	**5,702**	5,849	**5,696**	5,840
Adjustment relating to previous period	**9**	–	**9**	–
Reclassification to accrued income	**2**	23	**2**	23
Revalorisation (see note 6)	**176**	87	**176**	87
Amounts received	**551**	515	**551**	516
Released to income	**(854)**	(772)	**(854)**	(770)
Balance at 31 March	**5,586**	5,702	**5,580**	5,696

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Gross payments on account at 31 March	**5,586**	5,702	**5,580**	5,696
Deduction of recoverable contract costs (see note 14)	**(3,445)**	(3,577)	**(3,445)**	(3,577)
Net payments on account at 31 March	**2,141**	2,125	**2,135**	2,119
Of which:				
Current	**725**	700	**719**	695
Non-current	**1,416**	1,425	**1,416**	1,424
	2,141	2,125	**2,135**	2,119

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.

Notes to the financial statements (continued)

24. Nuclear Provisions

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Balance at 1 April	**160,672**	69,874	**160,593**	69,808
Provided for in the year and charged to:				
– Statement of Comprehensive Net Expenditure (note 7)	**7,406**	90,209	**7,406**	90,209
– Recoverable contract costs (a) (note 14)	**174**	2,072	**174**	2,072
Unwinding of discount charged to:				
– Statement of Comprehensive Net Expenditure (note 7)	**(1,231)**	1,409	**(1,231)**	1,409
– Recoverable contract costs (a) (note 14)	**(42)**	35	**(42)**	35
Decommissioning costs utilised in the year (note 7)	**(2,636)**	(2,637)	**(2,636)**	(2,637)
Recoverable contract costs released in year (note 14)	**(266)**	(303)	**(266)**	(303)
Opening group provision adjustment (b) (note 26)	**(221)**	–	**–**	–
In-year group provision adjustment (b) (note 26)	**(419)**	–	**–**	–
Provision changes impacting property, plant and equipment (note 11)	**68**	13	**–**	–
Total change in provision	**2,833**	90,798	**3,405**	90,785
Balance at 31 March	**163,505**	160,672	**163,998**	160,593
Of which:				
Current	**3,025**	2,880	**3,023**	2,878
Non-current	**160,480**	157,792	**160,975**	157,715
	163,505	160,672	**163,998**	160,593

(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 those elements of 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 2017 (NDA Group and Authority) is £4,874 million (2016: £5,008 million) – see note 14.

(b) Sellafield Ltd became a subsidiary of the NDA on 1 April 2016 and has been consolidated into NDA Group with effect from that date. Sellafield's net pension deficit of £221 million was brought into the Consolidated Statement of Financial Position on 1 April 2016, but as it was already implicitly included in the nuclear provision it is deducted here. The 2016/2017 increase in this pension deficit of £419 million is also implicitly included in the nuclear provision, requiring deduction here with a corresponding credit to the SoCNE – see note 7.

The discount implicit in recognising nuclear provisions is unwound over the life of the provisions, with the impact of the unwind of 1 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 £135 billion, whilst a decrease in discount rate of 0.5% would increase the provision to £205 billion.

Changes in the cost estimates of discharging the Nuclear Provision (representing increase or decrease in future decommissioning costs) are charged to the adjustments to provisions in the Statement of Comprehensive Net Expenditure. This charge includes the impact of restating liabilities from March 2016 values to current price levels. The overall increase in the provision was £2,833 million (2016: £90,798 million) of which the Authority estimates that £4,897 million related to changes in price levels (2016: £1,086 million).

The change in discount rates (see Appendix A page 120) in the current financial year produced an increase of £1,446 million (2016: £89,379 million increase).

A total of £2,902 million (2016: £2,940 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 2016, adjusted for price changes.

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 £68 million was recognised in the year (2016: £13 million increase).

24. Nuclear Provisions (continued)

Analysis of expected timing of discounted cashflows for the NDA Group Nuclear Provision is as follows:

NDA Group	Waste £m	Research £m	Sellafield £m	Fuel manufacturing and generation £m	Others £m	**2017 Total £m**	2016 Total £m
Within 1 year	55	277	1,989	649	54	**3,024**	2,880
2–5 years	283	1,117	8,441	1,719	222	**11,782**	11,398
6–20 years	2,216	1,811	32,109	1,605	559	**38,300**	36,980
21–50 years	4,760	250	40,570	1,027	339	**46,946**	45,801
After 50 years	8,196	98	36,821	18,755	223	**64,093**	63,613
	15,510	3,553	119,930	23,755	1,397	**164,145**	160,672
Deduction in respect of Sellafield pension deficit (b)						**(640)**	-
Total NDA Group						**163,505**	-
Sensitivity							
Increase	37,282	135	112,695	8,933	60		
Reduction	(6,214)	(270)	(18,782)	(8,933)	(120)		

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 in the long-term (beyond the next 20 years), which range from a £6,214 million reduction on the current estimate, to a £37,282 million increase.
- Activities on the sites primarily used for research (Dounreay, Harwell, Winfrith) are concerned with final decommissioning of assets and site clearance. Sites will be cleared by 2080. Options are being explored to accelerate site clearance, which in the case of Dounreay would reduce the provision by £270 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 £135 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 20 years). The potential costs range from a £18,782 million reduction against the current estimate, to a £112,695 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 2107. The main cost risk is in the final site clearance phase, which may increase costs by £8,933 million. Conversely a reduction in the costs associated with this phase may reduce costs by £8,933 million.

25. Other provisions

NDA Group	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
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 7)	(10)	(160)	–	(170)
Unwinding of discount (see note 7)	–	2	–	2
Balance at 31 March 2016	77	2,195	37	2,309
Adjustment relating to previous year	–	–	1	1
Provided for in the year (see note 7)	4	(949)	(1)	(946)
Released in the year (see note 7)	(9)	(134)	–	(143)
Unwinding of discount (see note 7)	–	(18)	–	(18)
Balance at 31 March 2017	72	1,094	37	1,203

Notes to the financial statements (continued)

25. Other provisions (continued)

Authority	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
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 7)	(10)	(160)	–	(170)
Unwinding of discount (see note 7)	–	2	–	2
Balance at 31 March 2016	75	2,195	11	2,281
Provided for in the year (see note 7)	4	(951)	–	(947)
Released in the year (see note 7)	(9)	(134)	–	(143)
Unwinding of discount (see note 7)	–	(18)	–	(18)
Balance at 31 March 2017	70	1,092	11	1,173

Analysis of net provisions

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Balance at 31 March	**1,203**	2,309	**1,173**	2,281
Amount deducted from recoverable contract costs (see note 14)	**(570)**	(846)	**(570)**	(846)
Net balance at 31 March	**633**	1,463	**603**	1,435
Of which:				
Current	**176**	208	**172**	207
2 to 5 years	**225**	426	**200**	424
After 5 years	**232**	829	**231**	804
Non-current	**457**	1,255	**431**	1,228
	633	1,463	**603**	1,435

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 2017. 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 comprise of provisions for insurance claims.

26. Retirement benefit schemes

The NDA Group has a range of pension schemes including both defined contribution and defined benefit plans. With effect from 1 April 2016 Sellafield Ltd became a subsidiary of the NDA and was consolidated with effect from that date, without any restatement of the 2016 figures. This has had a significant effect on the figures presented in this note.

Defined contribution schemes

NDA and RWM employees have pension benefits provided through the Civil Service pension arrangements. From 1 April 2015 a new pension scheme for civil servants was introduced – the Civil Servants and Others Pension Scheme or alpha, which provides benefits on a career average basis with a normal pension age equal to the member's State Pension Age (or 65 if higher). Prior to that date, NDA and RWM employees participated in the Principal Civil Service Pension Scheme (PCSPS), 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. The next actuarial valuation will be as at 31 March 2016, but has not yet been completed.

26. Retirement benefit schemes (continued)

Direct Rail Services Ltd (DRS) employees joining after 1 April 2008 participate on a defined contribution basis in the Combined Nuclear Pension Plan (CNPP).

Sellafield Ltd employees joining with effect from 24 November 2008 participate on a defined contribution basis in the Combined Nuclear Pension Plan (CNPP).

International Nuclear Services Ltd (INS) 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 INS is unable to identify its share of the underlying assets and liabilities. Consequently INS's participation in these schemes is accounted for as if they were defined contribution schemes, as permitted under IAS 19. INS'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 2 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 £23,673,000 (2016: £6,263,000) 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.

Sellafield and GPS SLC sections of the CNPP

Sellafield Ltd participates in the Sellafield and GPS SLC sections of the CNPP, a defined benefit (final salary) funded pension scheme. The defined benefit structure was available to all Sellafield Ltd employees up to 24 November 2008 when it was closed to new entrants.

A small number of Sellafield Ltd employees participate in the Magnox Electric Group section of the Electricity Supply Pension Scheme and participation in this scheme is in a section with other employers and Sellafield Ltd is unable to identify its share of the underlying assets and liabilities. Consequently Sellafield Ltd's participation in this scheme is accounted for as if it were a defined contribution scheme, as permitted under IAS 19. Sellafield Ltd's contributions to this scheme are assessed as part of a regular actuarial valuation and will vary in line with the funding position of the scheme.

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;

Notes to the financial statements (continued)

26. Retirement benefit schemes (continued)

- The aggregate average duration of the CNPP obligation is 21 years (2016: 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 (2016: 17 years). Actuarial valuations for the various defined benefit schemes referred to above are performed on a triennial basis with 'roll forward' valuations performed in intervening years. Accordingly the relevant valuations have been updated at 31 March 2017 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 Position are as follows:

	2017 £m	2016 £m
Benefit obligations	2,675	223
Fair value of scheme assets	(2,002)	(222)
Deficit in schemes	**673**	1
Unrecognised asset under IAS 19 para 64b *	1	4
Receivable from third parties		–
Net deficit recognised in schemes	**674**	5

* Relates to MNOPF and MNRPF schemes which would otherwise be in surplus, although position for all 7 schemes in aggregate is a net deficit

26. Retirement benefit schemes (continued)

Statement of Comprehensive Net Expenditure

The amounts recognised in the Statement of Comprehensive Net Expenditure are as follows:

	2017 £m	2016 £m
Current service cost	126	4
Net interest on net defined benefit (DB) assets / liabilities	6	1
Net cost in SoCNE	**132**	5
Actuarial loss / (gain)	401	(18)
Movement in unrecognised asset under IAS 19 para 64b	(3)	4
Receivable from third parties	–	5
Actuarial loss / (gain) recognised in OCE	**398**	(9)

Changes in the present value of the defined benefit obligations

The amounts recognised in the Statement of Financial Position are as follows:

	2017 £m	2016 £m
Opening defined benefit obligation	223	250
Acquisition of Sellafield Ltd	1,612	
Current service cost	126	4
Net interest on scheme liabilities	64	8
Employee contributions	18	–
Actuarial loss / (gain)	660	(34)
Benefits paid	(28)	(5)
Closing defined benefit obligation	**2,675**	223

Changes in the fair value of the scheme assets are as follows:

	2017 £m	2016 £m
Opening fair value of scheme assets	222	231
Acquisition of Sellafield Ltd	1,391	–
Interest income on scheme assets	58	7
Actuarial gain / (loss)	259	(16)
Employer contributions	82	5
Employee contributions	18	–
Benefits paid	(28)	(5)
Closing fair value of scheme assets	**2,002**	222

Changes in the value of unrecognised assets under IAS19 para 58b are as follows:

	2017 £m	2016 £m
Opening value of unrecognised assets	4	–
Movement in unrecognised assets	(3)	4
Closing value of unrecognised assets	**1**	4

Estimated expected employer contributions over the next financial year are as follows:

	2017 £m	2016 £m
Contributions including deficit repair payments	79	4

The major categories of plan assets as a percentage of total scheme assets are as follows:

	2017 %	2016 %
Equities	50	48
Property	10	2
Fixed Interest Gilts	2	13
Index Linked Gilts	12	17
Corporate Bonds	10	18
Hedge funds	–	1
Credit investment	15	–
Cash	1	1
Total	**100**	100

Notes to the financial statements (continued)

26. Retirement benefit schemes (continued)

Principal actuarial assumptions at the date of the SOFP (expressed in weighted averages):

	2017 %	2016 %
Discount rate	2.50	3.50
Future salary increases *	3.20–3.70	3.00–3.50
Rate of increase of pensions in payment	3.10–3.20	2.90–3.00
Rate of increase of pensions in deferment	2.20–3.20	2.00–3.00
Retail Price Inflation	3.20	3.00
Life expectancy for a male pensioner aged 65 (in years)	21.8	21.7
Life expectancy for a male non-pensioner currently aged 45 from age 65 (in years)	23.1	23.0

* For those schemes with members accruing benefits future salary increases for 2016 are assumed to be 3.20% for the next 3 years, 3.45% each of the following 10 years, and then 3.70% thereafter.

Mortality assumption

2017

S1NA Year of Birth tables with CMI 2017 projections subject to minimum improvements of 1% trend for males and females

2016

S1NA Year of Birth tables with CMI 2016 projections subject to minimum improvements of 1% trend for males and females

	2017 £'000	2016 £'000	2015 £'000	2014 £'000	2013 £'000
Experience adjustments on plan liabilities	(5)	16	(2)	4	4
Experience adjustments on plan assets	259	(16)	27	(1)	16

Sensitivity analysis

Change to	Change in assumption	Impact on DB obligation as at 31.03.17	Change in assumption	Impact on DB obligation as at 31.03.17
Discount rate	Increase by 0.5%	-12%	Decrease by 0.5%	13%
Rate of salary increase	Increase by 0.5%	5%	Decrease by 0.5%	-5%
Rate of price inflation	Increase by 0.5%	13%	Decrease by 0.5%	-12%
Rate of mortality	Increase by 1 year	2%		

Authority

Employee benefit obligations

The amounts recognised in the Statement of Financial Position are as follows:

	2017 £m	2016 £m
Benefit obligations	148	114
Fair value of scheme assets	(133)	(113)
Deficit in schemes	**15**	1
Receivable from third parties	–	–
Net deficit recognised in schemes	**15**	1

26. Retirement benefit schemes (continued)

Statement of Comprehensive Net Expenditure

The amounts recognised in the Statement of Comprehensive Net Expenditure are as follows:

	2017 £m	2016 £m
Current service cost	–	–
Net interest on net defined benefit assets / liabilities	–	(1)
Net cost in SoCNE	**–**	(1)
Actuarial loss / (gain)	14	(7)
Receivable from third parties	–	–
Actuarial loss / (gain) recognised in OCE	**14**	(7)

Changes in the present value of the defined benefit obligations

The amounts recognised in the Statement of Financial Position are as follows::

	2017 £m	2016 £m
Opening defined benefit obligation	114	124
Net interest on scheme liabilities	4	3
Actuarial loss / (gain)	32	(11)
Benefits paid	(2)	(2)
Closing defined benefit obligation	**148**	114

Changes in the fair value of the scheme assets are as follows:

	2017 £m	2016 £m
Opening fair value of scheme assets	113	115
Interest income on scheme assets	4	4
Employer contributions	–	–
Actuarial gain / (loss)	18	(4)
Benefits paid	(2)	(2)
Closing fair value of scheme assets	**133**	113

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 (2016: nil) as the Authority has no employees participating in any of these schemes.

	2017 £m	2016 £m
Contributions including deficit repair payments	**1**	–

The major categories of plan assets as a percentage of total scheme assets are as follows:

	2017 %	2016 %
Equities	37	50
Property	9	–
Fixed Interest Gilts	–	–
Index Linked Gilts	23	25
Corporate Bonds	20	25
Credit investments	11	–
Cash	–	–
Total	**100**	100

Notes to the financial statements (continued)

26. Retirement benefit schemes (continued)

Principal actuarial assumptions at the date of the SOFP (expressed in weighted averages):

	2017 %	2016 %
Discount rate	2.50	3.50
Future salary increases	–	–
Rate of increase of pensions in payment	3.10–3.20	2.90–3.00
Rate of increase of pensions in deferment	2.20–3.20	2.00–3.00
Retail Price Inflation	3.20	3.00
Life expectancy for a male pensioner aged 65	21.8	21.7
Life expectancy for a male non pensioner currently aged 45 from age 65	23.1	23.0

Mortality assumption

2017

S1NA Year of Birth tables with CMI 2017 projections subject to minimum improvements of 1% trend for males and females

2016

S1NA Year of Birth tables with CMI 2016 projections subject to minimum improvements of 1% trend for males and females

	2017 £m	2016 £m	2015 £m	2014 £m	2013 £m
Experience adjustments on plan liabilities	1	2	2	2	–
Experience adjustments on plan assets	18	(4)	11	2	8

Sensitivity analysis

Change to	Change in assumption	Impact on DB obligation as at 31.03.17	Change in assumption	Impact on DB obligation as at 31.03.17
Discount rate	Increase by 0.5%	-10%	Decrease by 0.5%	11%
Rate of salary increase	Increase by 0.5%	–	Decrease by 0.5%	–
Rate of price inflation	Increase by 0.5%	11%	Decrease by 0.5%	-10%
Rate of mortality	Increase by 1 year	2%		

27. Non-controlling interests

Non-controlling interests balance is the non-controlling interests' share of one non-wholly owned subsidiary (see note 13).

NDA Group	**2017 £m**	2016 £m
At 1 April	**2**	2
Change in equity of non-controlling interests during year	**–**	–
At 31 March	**2**	2

28. Commitments under leases

28 (a) Operating leases – NDA as lessee

	NDA Group		**Authority**	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Minimum lease payments under operating leases recognised as an expense in the year	**19**	11	**4**	2

28. Commitments under leases (continued)

Total future minimum lease payments under operating leases are given in the table below:

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Buildings and other:				
Not later than 1 year	**21**	18	**4**	2
Later than 1 year and not later than 5 years	**58**	69	**15**	9
Later than 5 years	**14**	20	**75**	37
	93	107	**94**	48

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 2017 and 2044, and leases for industrial facilities with expiry dates between 2021 and 2099.

28 (b) Operating leases – NDA as lessor

Property rental income earned during the year amounted to £2 million (2016: £5 million).

Total future minimum lease receivables under operating leases are given in the table below:

	NDA Group		Authority	
	2017 £m	2016 £m	**2017 £m**	2016 £m
Buildings:				
Not later than 1 year	**2**	3	**5**	3
Later than 1 year and not later than 5 years	**5**	12	**18**	10
Later than 5 years	**12**	52	**74**	43
	19	67	**97**	56

Operating lease receipts represent rentals receivable by the Group in respect of various properties leased on commercial terms and historical agricultural lease agreements.

29. Contingent liabilities

Indemnities

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 2017 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 CNPP, the Magnox section of the ESPS, and the GPS Pension Scheme. Provisions for known deficits are included within Nuclear Provisions. 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 SLCs. 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. Indemnities are in place in respect of Magnox, LLWR and Dounreay as set out in the relevant Parent Body Agreements. In addition, indemnities are provided to the previous PBOs of Magnox and Sellafield covering the periods in their ownership. 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.

On 29 March 2017, the UK Government submitted its notification to leave the EU in accordance with Article 50. The triggering of Article 50 starts a 2 year negotiation process between the UK and the EU.

Notes to the financial statements (continued)

Any subsequent changes in legislation, regulation and funding arrangements are subject to the outcome of the negotiations. As a result, an unquantifiable remote contingent liability is disclosed. In accordance with accounting standards, no contingent assets can be recognised. During this 2 year period, which includes the full duration of the next accounting period, the UK remains a full member of the EU with all the rights and obligations arising from membership. There are no significant impacts on the financial statements in the short-term from making the formal notification.

International Carrier Bond
During 2014/2015 the NDA procured a US Bond on behalf of its 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.

30. Related parties

Government bodies
The NDA is an Executive NDPB sponsored by BEIS, which is regarded as a related party. During the year, the NDA has had various material transactions with BEIS and with other entities for which BEIS is regarded as the responsible department. The NDA receives grant financing from BEIS. 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 (2016: £2 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:

	Sales of goods to parent		Purchase of goods from parent		Amounts owed by related parties		Amounts owed by related parties	
	2017 £m	2016 £m	**2017 £m**	2016 £m	**2017 £m**	2016 £m	**2017 £m**	2016 £m
Direct Rail Services Ltd	**(28)**	(27)	**1**	2	**7**	7	**–**	–
International Nuclear Services Ltd	**(88)**	(77)	**8**	1	**203**	203	**–**	–
NDA Properties Ltd	**(35)**	(18)	**–**	–	**43**	43	**–**	–
Pacific Nuclear Transport Ltd	**–**	–	**2**	2	**–**	–	**–**	–
Rutherford Indemnity Ltd	**(1)**	(3)	**–**	–	**–**	–	**–**	–
Radioactive Waste Management Ltd	**(25)**	(25)	**1**	1	**–**	–	**–**	–
NDA Archives Ltd	**(2)**	(1)	**–**	–	**–**	–	**–**	–
Sellafield Ltd	**(1,999)**	–	**18**	–	**–**	–	**368**	–

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 not repayable until at least 2018.

Amounts owed by NDA Properties Limited includes a loan of £20 million which is interest bearing at a fixed rate, repayable in instalments over 25 years to 2038. At 31 March 2017, the balance owing was £18 million (2016: £18 million).

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 48 to 58.

Authority	2017 £'000	2016 £'000
Short term employee benefits	2,078	2,647
Post-employment benefits	279	310
Other long term benefits	713	567
	3,070	3,524

31. 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.

Subsidiary Performance

Direct Rail Services Ltd

Direct Rail Services Ltd (DRS) was established in 1995 to provide rail transport for nuclear material in the UK.

DRS has built up industry-leading expertise in the movement of spent nuclear fuel, decommissioning waste and in providing support for nuclear construction.

DRS continues to provide a co-ordinated service to the nuclear estate.

As part of its mission, DRS looks to be the world leader in safe, secure and reliable nuclear rail logistics in support of the NDA mission, harnessing a culture of innovation, pride, respect and environmental awareness whilst providing value for money on behalf of the UK taxpayer.

Key 2016/17 achievements include:

- Continued strong performance across all aspects of Health, Safety and Environment
- Successful delivery of 100% of the nuclear transport programmes from UK locations to Sellafield
- In January, delivery was taken of the first technically advanced Class 88 locomotive, which is currently undergoing testing against UK and European railway standards
- Working in partnership with the nuclear estate, DRS Project Managers have successfully delivered new nuclear flask carrying wagons, on time, to clients
- Continued support of the NDA's socio economic agenda by working with the business community in developing rail transport opportunities

DRS performance as "The Best Performing Rail Freight Operator" within the rail freight industry has again been recognised with a 4th consecutive Golden Whistle Award.

A DRS train transporting ISO containers to LLWR

International Nuclear Services Ltd

International Nuclear Services Ltd (INS) plays a vital role in support of NDA's mission, managing a large portfolio of domestic and international contracts for nuclear fuel recycling and nuclear transport services on our behalf.

INS operates Pacific Nuclear Transport Ltd (PNTL), the world's most experienced shipper of nuclear materials.

Key 2016/17 achievements include:

- Return of overseas waste - INS successfully completed a 6th return of high level waste (HLW) to Japan, and a 2nd and final return of HLW to Switzerland. Both shipments were a key part of the NDA's strategy to repatriate highly active waste from the UK, fulfil overseas contracts and deliver UK government policy
- Dounreay fuels consolidation – a continuing key role in the complex programme to transfer materials from Dounreay as part of work to close the site
- Intermediate level waste - INS has delivered a new disposal route for intermediate level waste (ILW) from various UK sources including hospitals, universities and industry. Several transports of ILW took place in 2016/17
- Supporting global nuclear security - recent specialist transport shipments have cemented INS's position as a key asset supporting the UK's commitment to global nuclear security - a contribution highlighted at the 2016 Nuclear Security Summit in Washington DC
- Marketing nuclear knowledge - INS continues to connect British nuclear expertise with markets in Asia, as part of its role to market the portfolio of UK knowledge and the NDA's intellectual property

Two of the PNTL fleet docked at Barrow terminal

NDA Archives Ltd

NDA Archives Ltd (NDAAL) was established to provide long-term archive and records management services to the NDA estate, principally through developing a purpose-built facility in a single location.

This archive will consolidate and appropriately store the large volumes of information currently retained by the NDA, its subsidiaries and SLCs in accordance with statutory obligations and the business need to retain and make available this information for future re-use.

Key 2016/17 achievements include:

- Opening to the public of Nucleus (The Nuclear and Caithness Archives) at Wick in Scotland
- Establishing an NDA-led project to 'sift and lift' relevant records from sites to Nucleus, a programme expected to last at least 5 years and leading development of an exemplar information and records management service on behalf of the NDA
- Completing transfer of the photographic collection from Dounreay
- Establishing a number of Service and End User Agreements and overseeing the management of a Commercial Partner (Restore Scan Ltd) who is operating the archive facility

Nucleus (The Nuclear and Caithness Archives) at Wick

NDA Properties Ltd

NDA Properties Ltd owns and manages properties that are located outside the boundaries of nuclear licensed sites. In line with the NDA's Land and Property Management Strategy, these assets are selectively developed and their use optimised to benefit the NDA mission.

Key 2016/17 achievements include:

- Completed construction of the £21 million Nucleus archive building and hand-over to NDA Archives Ltd
- Construction of a new firearms training facility in Cumbria that will be used by the Civil Nuclear Constabulary, expected to complete ahead of schedule in Autumn 2017
- Design of work on a new Off-Site Command Facility for Sellafield
- Continuing to market for sale properties that are surplus to requirements of the decommissioning mission
- Reviewing options for the refurbishment of Hinton House in Warrington to ensure that the future requirements of the main tenant, Sellafield Ltd, are met

The company uses a combination of NDA personnel and external property specialists, who are engaged to deliver the essential programme of maintenance for the diverse portfolio of assets.

The CNC training facility underconstruction

Subsidiary Performance (continued)

Rutherford Indemnity Ltd

Rutherford Indemnity is a regulated Guernsey insurance company dedicated to the provision of property, nuclear liability and other insurance to the NDA and its estate.

Working with the NDA and its brokers, Rutherford agrees the risks that it is willing to insure, taking into account its ability to withstand losses. In some instances, Rutherford arranges additional cover from commercial reinsurers with approved credit ratings.

The company engages closely with the NDA estate to understand and manage the risks faced and to drive down losses, and focus external insurance spend on those policies required by legislation. In this way it is able to help the NDA drive maximum value from its insurance programme.

There have been no major claims reported during the year.

Rutherford has substantial insurance reserves and its investment portfolio is overseen by an Investment Committee. Over the last year, these investments generated a return of 11.3%, notwithstanding periods of volatility, remaining within the strict risk limits and ethical guidelines imposed by the Board.

The company operates in accordance with the regulations issued by the Guernsey Financial Services Authority, and this year welcomed an additional locally based independent director to further strengthen their Board.

Rutherford provide insurance for buildings under construction, such as the now-completed EPS waste store at Sellafield

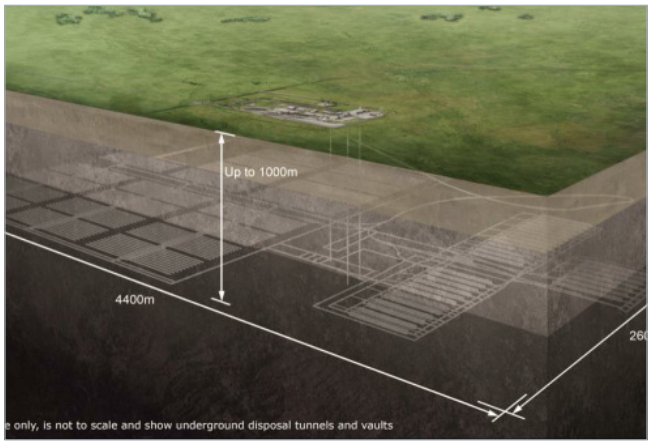
Radioactive Waste Management Ltd

Established as a wholly owned NDA subsidiary in 2014, RWM's Corporate Strategy 2015-2018 sets out its vision, mission and values, and the factors on which its strategic approach is based. RWM's vision is a safer future by managing radioactive waste effectively to protect people and the environment.

RWM's mission and responsibility is to plan for and ultimately deliver geological disposal of higher activity wastes in accordance with government policy. This includes developing a Geological Disposal Facility (GDF) and providing waste management solutions.

Key 2016/17 developments include:

- A major update to the Generic Disposal System Safety Case
- Delivery against the agreed disposability assessment plan and establishment of a new process for waste package records approvals
- The development and application with the British Geological Survey of national geological screening guidance to provide authoritative information for the GDF siting process
- Significant awareness-raising of geological disposal to create interest in the siting process
- A transition programme and independent 'readiness review' to enhance and confirm RWM's capability as a delivery organisation to lead a major infrastructure programme



An artist's impression of what the GDF would look like

Site Licence Company Performance

Introduction

The following section gives 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 key milestones and activities outlined in our 2016/19 Business Plan.

Summary of performance 2016/17

Status description		Number of targets	%
Missed target	The key milestone or activity was due for completion before 31 March 2017 and as at that date there had been a delay against the planned schedule and the target has been missed	7	6
Behind target	The key milestone or activity was due for completion after 31 March 2017 and as at that date there had been a delay against the planned schedule with possibility of recovery	8	6.5
On target	The key milestone or activity was due for completion after 31 March 2017 and as at that date was on track to be completed to schedule	83	69
Complete	The key milestone or activity has been completed during the financial year (2016/17)	13	11
Deferred	Activity deferred due to re-prioritisation and/or reallocation of funding	8	6.5
Not required	As a result of changes to the plan, this activity is no longer required.	1	1
Totals		**120**	**100**

Updated cost and schedule information for programmes and projects at the sites can be found in Appendix C on pages 123 - 125.

More details about the performance of our estate can be found in our Quarterly Performance Reports on our website:www.gov.uk/nda

The following terminology is 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, against which progress is measured throughout the year. The milestones and activities listed for each site are taken from the 2016/17 NDA Business Plan and are grouped by strategic theme.

SLC Performance (continued)

Dounreay Site Restoration Ltd

Dounreay Decommissioning Programme

Programme objective

To achieve an Interim End State for the Dounreay site such that no further work will be required, other than natural decay of radioactive materials to achieve the closure thresholds required for site end state.

Recent progress

Several 2016/17 Business Plan activities have been delayed/deferred due to reprioritisation of the Dounreay materials consolidation programme. The target dates to achieve the IES and the associated cost targets are being further reviewed as a consequence of supporting the consolidation of 'exotic' fuels at Sellafield. It is expected that these changes will still deliver a significant reduction in the total lifecycle costs of the site up to its Final End State.

Dounreay Site Restoration Ltd (DSRL) manages the decommissioning of the Dounreay site as well as the operation of the adjacent Low Level Waste (LLW) disposal facility. Dounreay was established as a research site in the mid-1950s with 3 experimental reactors, fuel production and processing facilities. The last reactor ceased operation in 1994.

Operated by PBO:
Cavendish Dounreay Partnership Ltd – Cavendish Nuclear, CH2M and AECOM

Dounreay Decommissioning Programme 2016/17 Business Plan activities

Integrated Waste Management	Status
Dounreay Fast Reactor (DFR) raffinate immobilisation complete	
Ammonium Diuranate (ADU) floc immobilisation complete	
Silo headworks for waste removal operational	
Solid waste treatment and packaging plant operational	
Shaft headworks for waste removal operational	
Prototype Fast Reactor (PFR) irradiated fuel material transferred to spent fuel store	
Particles remediated to agreed end-point	
Dounreay Materials Test Reactor (DMTR) building complex decontamination complete	
Other Business Plan Activities	
Critical Enablers	
Support Small & Medium Enterprise organisations by increasing overall spend with them to 23.5%-25%	
Continuation of information assurance activities and supporting processes	

The last of the highly radioactive liquid metal coolant has been removed from the Dounreay Fast Reactor (DFR) and safely destroyed.

Low Level Waste Repository Ltd

National Low Level Waste (LLW) Programme

The National Low Level Waste programme is a UK-wide initiative led by the Low Level Waste Repository Ltd to deliver the UK Nuclear Industry Solid Low Level Waste Strategy.

Programme objective

To champion the adoption of the Waste Hierarchy (prevention, minimisation, re-use, recycling and disposal) across the NDA estate to significantly reduce the costs of dealing with low level waste and to avoid the need for a second UK low level waste repository.

Recent progress

The waste diversion programme continues to be successful, with nearly 90% of LLW diverted away from the repository for alternative treatment and use during 2016/17.

LLWR received planning permission from Cumbria County Council in July 2016 for construction of future disposal capacity and capping of existing facilities.

LLWR has also completed upgrades to site security with construction of a new perimeter fence and site entrance facilities.

Low Level Waste Repository Ltd (LLWR) is responsible for both the operation of the LLW site and the delivery of the National Low Level Waste Programme on behalf of the NDA.

Operated by PBO:
UK Nuclear Waste Management Ltd – AECOM, Studsvik UK, Areva

LLW Programme 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Ongoing site preparation for phased construction of the final cap for trenches 1 to 7 and Vault 8	
Ongoing decommissioning of Plutonium Contaminated Material facilities	
Integrated Waste Management	
Continue segregated waste, treatment and disposal services in line with UK LLW Strategy	
Work with consigning SLCs to improve waste forecasts and inventory	
Delivery of the National LLW Programme to optimise LLW Strategy implementation	
Work with consigning SLC's to improve waste forecasts and inventory	
Manage and operate LLWR safely to provide an effective UK disposal service	
Other Business Plan Activities	
Critical Enablers	
Continue to pursue overall cost savings in delivery of the Lifetime Plan	
Continue to pursue positive SLC behaviours	
Continue to support Small & Medium Enterprise organisations by pursuing increased use.	
Propose and implement medium-term organisation structure and accommodation strategy.	
Complete the upgrades to the perimeter fencing.	
Continuation of information assurance activities and supporting processes.	

An aerial view of the LLW Repository near Drigg, Cumbria

SLC Performance (continued)

Magnox Ltd

Magnox Decommissioning Programme

Programme objective

To complete defuelling in line with the Magnox Operating Programme (MOP) and to deliver the 12 Magnox sites into their Care and Maintenance (C&M) interim state (note for Winfrith this will be its final end state).

Recent progress

Across Magnox waste disposals have met all 3 Low Level Waste (LLW) diversion targets set in 2016/17 Joint Waste Management Plan and legacy waste stockpiles are being reduced.

The Care and Maintenance programme has developed security arrangements proposals ready for Magnox sites entrance into Care and Maintenance and is working with ONR-CNS to formally confirm them.

An asbestos management improvement plan is being executed across all Magnox sites.

In March 2017, the NDA announced its decision to terminate the Magnox contract on 2 years' notice from 31 August 2017, with the support of Government and CFP. The contract continues to operate in line with the existing arrangements until an alternative for managing the sites post 2019 is agreed. Alongside this, the consolidation process is progressing and is scheduled for conclusion in Autumn 2017.

Magnox Ltd is the SLC responsible for the operation of 12 sites of which 10 are former nuclear power stations, Berkeley, Bradwell, Chapelcross, Dungeness A, Hinkley Point A, Hunterston A, Oldbury, Sizewell A, Trawsfynydd, and Wylfa and 2 are former research sites Harwell and Winfrith.

Operated by PBO: Cavendish Fluor Partnership – Cavendish Nuclear and Fluor Corporation

Magnox Decommissioning Programme 2016/17 business plan activities

Site Decommissioning and Remediation	Status
Continuation of estate decommissioning and demolition activities	
Spent fuels	
Management of MOP9 and co-ordination of Magnox fuel management activities with Sellafield and Dounreay	
Progression of Wylfa defuelling in year	
Nuclear Materials	
Delivery of the Magnox nuclear materials programme activities	
Integrated Waste Management	
Delivery of the Magnox elements of the estate-wide low level waste management plan.	
Progression of activities to retrieve, process and package wastes.	

Magnox Decommissioning Programme 2016/17 business plan activities by site

Berkeley, Gloucestershire

Integrated Waste Management	Status
Continuation of retrieval and packaging activities in the active waste vaults	
Commencement of activities for shielded area waste retrieval	
Commence Design and Build of encapsulation facility	

Bradwell, Essex

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Ponds complex and contaminated structures (vaults) completed for entry into Care and Maintenance	
Integrated Waste Management	
Continue Fuel Element Debris (FED) dissolution	
Continuation of ILW conditioning activities	
Consign LLW FED to LLWR	

Chapelcross, Dumfries and Galloway

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Integrated Waste Management	
In-pond equipment operational	
IWM Preparation for ILW retrievals	

Dungeness A, Kent

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Interim Care and Maintenance	

Integrated Waste Management	Status
Commence conditioning facility build	
Preparations for ILW retrievals	
Continuation of ILW Store design and construction*	

* Facility no longer required. Dungeness ILW will now be stored at Bradwell.

Harwell, Oxfordshire

Site Decommissioning and Remediation	Status
Continuation of Liquid Effluent Treatment Plant (LETP) area environmental restoration	
Decommissioning of redundant facilities	
Continuation of decommissioning and demolition activities	

Nuclear Materials	
Continuation of the programme for the transfer of nuclear materials and contact-handled ILW	

Integrated Waste Management	
Recovery, processing and packaging of solid ILW	
Continuation of ILW Store design and construction	

Hinkley Point A, Somerset

Site Decommissioning and Remediation	Status
Completion of diesel plume ground contamination remediation	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	

Integrated Waste Management	
Commence Interim Storage Facility design	
Continuation of preparations for FED retrieval activities	
Initiation of ILW skip management arrangements	
Commence Wet Waste and Vessel consolidations	

Hunterston A, Ayrshire

Site Decommissioning and Remediation	Status
Completion of pond surface stabilisation	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Completion of solid ILW encapsulation plant civil construction	

Integrated Waste Management	
Progressing of ILW retrievals, processing and storage activities	

Oldbury, South Gloucestershire

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Commence ponds draining and stabilisation	

Integrated Waste Management	
Commence ILW retrieval enabling works	

Sizewell A, Suffolk

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Continuation of ponds decommissioning	

Integrated Waste Management	
Commencement of FED retrievals**	
Commencement of ILW retrieval enabling works	

** This work was deferred in the LTP15 when the bid plan was uplifted and will now commence in 2018/19.

Trawsfynydd, North Wales

Site Decommissioning and Remediation	Status
Strategy agreed for ponds End State entry***	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	

Integrated Waste Management	
Continuation of FED plant commissioning	
Continuation of sludge and resin encapsulation	

*** Work to determine the preferred option for the Trawsfynydd End State is ongoing. A preliminary position has been determined in conjunction with the NDA, regulators and other stakeholders and which is now being validated with technical underpinning. The final position is expected to be established early in 2017/18

Winfrith, Dorset

Site Decommissioning and Remediation	Status
DRAGON – continue reactor decommissioning	
SGHWR – commencement of reactor decommissioning contract	
SGHWR – continue decommissioning of the primary containment areas	
Continuation of decommissioning and demolition activities	

SLC Performance (continued)

Magnox Ltd

Wylfa, Anglesey

Site Decommissioning and Remediation	Status
Decommissioning and demolition activities in preparation for entry into Care and Maintenance	
Provision of support and assets to nuclear new build programme	
Integrated Waste Management	
Progression of ILW retrievals and packaging	
Spent Fuels	
Defuelling activities in line with MOP9	

Cutting up the last delay monitoring tank at the Bradwell ponds in preparation for Care and Maintenance

Projects within the Magnox Decommissioning programme

Berkeley Vaults Retrievals

This project involves the retrieval, processing and packaging of the operational ILW from the vaults at Berkeley site to meet the compliance requirements of the disposal authority.

Other Business Plan Activities	Status
Critical Enablers	
Implement the outcome of consolidation and establish as part of business as usual.	
Continuation of information assurance activities and supporting processes.	
Support Small & Medium Enterprise organisations by increasing overall spend with them to 23.5-25%.	
Support to NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal.	
Development of Interim End State approaches, utilising revised management arrangements.	

Sellafield Ltd (NDA subsidiary)

Pile Fuel Storage Pond (PFSP)

The PFSP is 1 of 4 legacy ponds and silos facilities at Sellafield prioritised for clean-up by the NDA.

Programme objective

To retrieve and package the waste from the Pile Fuel Storage Pond for long-term storage prior to disposal, followed by dewatering of the pond and putting the facility into an interim end state for long-term management. Final decommissioning of the facility is outside the scope of the current programme and is linked to the overall end state for Sellafield.

Key Hazard Reduction Milestone
Remove and treat all ILW from the pond by
2024

PFSP Programme 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Continue consolidation of sludge within the pond	
Continue with consolidation and export of contaminated metals and recovery of residual fuel for treatment and storage	
First export of sludge to Waste Encapsulation Plant (WEP)	

Sellafield Ltd is the SLC responsible for the operation of the Sellafield site in Cumbria. On the 1 April 2016 Sellafield Ltd became a wholly owned subsidiary of the NDA.

First Generation Magnox Storage Pond (FGMSP)

FGMSP is 1 of 4 legacy ponds and silos facilities at Sellafield prioritised for clean-up by the NDA.

Programme objective

To retrieve and package the waste from the First Generation Magnox Storage Pond for long-term storage prior to final disposal, followed by the decommissioning of the facility.

Key Hazard Reduction Milestone
Complete bulk fuel, sludge and miscellaneous Beta Gamma waste exports in
2033

FGMSP Programme 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Continue export of contaminated metal wastes from wet bays	
Commence export of material from pond to the Fuel Handling Plant	
Continue export of sludge from pond to Sludge Packaging Plant 1 (SPP1) buffer	

Projects within the FGMSP programme

Export
To provide a facility for pond skips to be safely placed inside shielded flasks. This project is complete and the facility is operational.

Bulk Sludge and Fuel Retrievals
This project will provide the main capabilities to retrieve sludge, fuel and other solid waste from the pond and highest priority de-canning facilities ('wet bays'). This project is in the delivery phase.

SLC Performance (continued)

Sellafield Ltd (NDA subsidiary)

Magnox Swarf Storage Silo (MSSS)

The MSSS is 1 of 4 legacy ponds and silos facilities at Sellafield prioritised for clean-up by the NDA.

Programme objective

To retrieve and package the waste from the Magnox Swarf Storage Silos into a passively safe form for long-term storage ready for disposal, followed by the decommissioning of the MSSS facility.

Key Hazard Reduction Milestone
Complete residual retrievals in
2052

MSSS Programme 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Commence inactive commissioning Silo Emptying Plant machine 2 (SEP2)	
Progress capability required to implement the revised Magnox Swarf Storage Silo waste handling strategy to develop the downstream capability to receive and store material from this facility	

Projects within the MSSS programme

Retrievals
This project will deliver the capability to mechanically retrieve waste from the MSSS silos and to export it (via shielded packages) to the downstream waste receipt facilities. The project is in delivery with the earliest date that retrievals can start being accelerated from 2023 to 2019.

Silo Maintenance Facility (SMF)
This project will provide capability to store, decontaminate, maintain and change over retrieval equipment and tool/waste packages used for retrieval from the silos. The project is in the construction phase with commissioning expected to complete in 2019.

Box Encapsulation Plant (BEP)
This project will deliver the facility that will be used to treat and immobilise waste from MSSS, as well as other legacy facilities, to allow the waste to be interim-stored pending final disposal. The project is at the detail design phase and a final business case to seek sanction through to project completion is being prepared.

Pile Fuel Cladding Silo (PFCS)

PFCS is 1 of 4 legacy ponds and silos facilities at Sellafield prioritised for clean-up by the NDA.

Programme objective

To retrieve and package the waste from the Pile Fuel Cladding Silo into a passively safe form ready for disposal, followed by the decommissioning of the PFCS facility.

Key Hazard Reduction Milestone
Complete bulk retrievals in
2033

PFCS Programme 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Continue development of the capability to retrieve waste	

Projects within the PFCS programme

Retrievals
This project covers the design, installation and commissioning of the integrated systems needed to retrieve the solid wastes from the PFCS. The project is currently in the detailed design phase with construction of some of the specialist equipment already in progress.

Box Encapsulation Plant Product Store - Direct Import Facility (BEPPS-DIF)

This project will provide an interim-storage facility for packaged waste from the PFCS and other Sellafield facilities, most notably MSSS. This project is nearing the completion of detailed design phase with civils works ongoing in parallel.

Security, Emergency Management and Resilience Programme (SERP)

Programme objective

To deliver enhancements and improvements to 3 interrelated areas at the Sellafield site: physical security; emergency management procedures; and resilience capability.

Estimated cost - £1,252 million

Projects in the SERP programme

Fence Civils Cluster 1
This project is providing additional layers of physical security at the Sellafield site including new fences, rail gates, turnstiles, search areas and vehicle barriers. The project outputs are now being turned into capabilities.

Technology Cluster
The project outputs will provide the site with a unified command and control capability. This will include the colocation of emergency response services and site emergency management teams to provide a centralised location from which to plan, manage and co-ordinate emergency response and recovery activities.

Cyber Security
The cyber project continues to make good progress against the known cyber risks and vulnerabilities.

Fence Civils Cluster 2
The project has completed its tendering process and is now in the process of agreeing robust schedules and estimates to complete the works. Detailed design has been completed in advance of the tendering process and the supply chain engaged to deliver the construction and commissioning phases. Project outputs in this cluster include a high security area put in place around facilities in the north of the Site and enhancements to the existing security arrangements for the River Calder.

Other Major Projects - Sellafield Ltd

Sellafield Product and Residue Store Retreatment Plant

The project will deliver capability to treat, re-package and transfer nuclear material into the existing Sellafield Product and Residue Store for long-term safe and secure storage. The project is currently in its preliminary design phase.

Separation Area Ventilation (SAV)

This project, a major design and build, comprises a new 2-storey ventilation plant room housing the ventilation equipment, a ventilation discharge monitoring plant room and a series of new steel support structures. It will divert the aerial discharges from the historic Windscale Pile 1 and First Generation Reprocessing Plant chimneys to the new SAV chimney which will enable these older facilities to be demolished. The project has handed the facility over for operational use.

Evaporator D

One of the largest projects under way at Sellafield is the construction of a new evaporator (Evaporator D) to support the reprocessing of spent fuel from the Magnox and Advanced Gas Reactor (AGR) fleet of power stations as well as supporting the Post-Operational Clean Out (POCO) of Sellafield facilities as part of their decommissioning. Until the Evaporator D project is complete, reprocessing throughput may be limited by the capacity of existing evaporators at Sellafield which are approaching the end of their operational life. The project is in its inactive commissioning phase.

Evap D 2016/17 Business Plan activities

Integrated Waste Management	Status
Start of active commissioning of Evaporator D.	

SIXEP Contingency Plant (SCP)

The Sellafield Ion Exchange Effluent Plant (SIXEP) is an existing facility which removes radioactivity from liquid feeds from a number of plants across the site. SIXEP capability is required at Sellafield until 2050 to support site decommissioning activity, in particular the decommissioning of the Magnox Swarf Storage Silo and the First Generation Magnox Storage Pond. This project will modify the existing SIXEP plant to extend its operating life and, in parallel, will build a new SIXEP facility alongside the existing plant. The project is in detail design stage.

SLC Performance (continued)

Sellafield Ltd

Other Business Plan Activities	Status
Site Decommissioning and Remediation	
Continue the decommissioning and demolition of the diffuser from Windscale Pile Chimney.	
Continue work to support demolition of First Generation Magnox Reprocessing stack	
Spent Fuels	
Continue to reprocess Magnox spent fuel in line with MOP9.	
Continue to receive and manage AGR spent fuel from EDF Energy.	
Continue to reprocess oxide spent fuel through THORP from EDF Energy.	
Continue preparations for the long-term interim storage of AGR spent fuel following the completion of THORP reprocessing.	
Nuclear Materials	
Continue the safe and secure storage of plutonium in line with UK policy.	
Continue to receive deliveries of special nuclear materials from Dounreay.	
Continue the programme for the transfer of materials from Harwell.	
Ensure safe, secure management of our uranics inventory.	
Integrated Waste Management	
Continue to process HAL through the Waste Vitrification Plant.	
Repatriation of overseas-owned vitrified waste to its country of origin.	
Continue to generate savings and preserve capacity at the LLW Repository (LLWR) by diversion of materials into the supply chain in line with the National LLW Strategy implementation and optimisation plan.	
Critical Enablers	
Continue the Sellafield infrastructure enhancement programme.	
Support Small and Medium Enterprise organisations by increasing overall spend with them to 23.5-25%.	
Continuation of information assurance activities and supporting processes.	

Sellafield Vitrification Plant

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 byproduct/legacy material from uranium enrichment (known as 'Tails') through URENCO's Tails Management Facility.

Capenhurst Nuclear Services Ltd 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Continue the decommissioning of redundant areas	
Continue land remediation projects such as East Side Curtilage	
Nuclear Materials	
Continue reference design phase for the Legacy Cylinder Facility	
Commencement of the Enabling Works for the Legacy Cylinder Facility	
Completion of required upgrades to the storage facilities	
Continue the safe storage of uranic material including Magnox Depleted Uranium (MDU) and legacy Uranium Hexafluoride cylinders	
Continue the safe management and disposal of legacy wastes and residues	

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.

Springfields Fuels Ltd 2016/17 Business Plan activities

Site Decommissioning and Remediation	Status
Continue the post operational clean out and decommissioning of redundant buildings	
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.	
Continue the management and disposal of legacy wastes.	

Glossary

A&RAC - Audit and Risk Assurance Committee
AGR - Advanced Gas-cooled Reactor
AO - Accounting Officer
BEIS - Department for Business, Energy and Industrial Strategy
C&AG - Comptroller and Auditor General
C&M - Care and Maintenance
CEO - Chief Executive Officer
CETV - Cash Equivalent Transfer Value
CFO - Chief Financial Officer
CFP - Cavendish Fluor Partnership
CNC - Civil Nuclear Constabulary
CNPP - Civil Nuclear Pension Plan
CSRP - Cyber Security and Resilience Programme
DCF - Dalton Cumbrian Facility
DfT - Department for Transport
DRS - Direct Rail Services Ltd
DSRL - Dounreay Site Restoration Ltd
EA - Environment Agency
EXCO - Executive Committee
FED - Fuel Element Debris
FGMSP - First Generation Magnox Storage Pond
FReM - Government Financial Reporting Manual
FTE - Full Time Equivalent
GDF - Geological Disposal Facility
HLW - High Level Waste
HSE - Health and Safety Executive
HSL - Health and Safety Laboratory
IAEA - International Atomic Energy Agency
IES - Interim End State
IFRS - International Financial Reporting Standards
IGP - Information Governance Programme
IiP - Investors in People
ILW - Intermediate Level Waste
INES - International Nuclear and Radiological Event Scale
INS - International Nuclear Services Ltd
ISF - Interim Storage Facility
LLW - Low Level Waste
LLWR - Low Level Waste Repository Ltd
LTA - Lost Time Accident
LTIP - Long-Term Incentive Plan
M&O - Management and Operating contract
MOP 9 - Magnox Operating Programme 9
MSSS - Magnox Swarf Storage Silo
NAO - National Audit Office
NDA - Nuclear Decommissioning Authority
NDAAL - NDA Archives Ltd
NDPB - Non-Departmental Public Body
NED - Non-Executive Director
NRW - Natural Resources Wales
ONR - Office for Nuclear Regulation
PBO - Parent Body Organisation
PCSPS - Principal Civil Service Pension Scheme
PFCS - Pile Fuel Cladding Silo
PFSP - Pile Fuel Storage Pond
PNTL - Pacific Nuclear Transport Ltd
R&D - Research and Development
REMCO - Remuneration Committee
RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrence Regulations
RWM - Radioactive Waste Management Ltd
S&SC - Safety and Security Committee
SEPA - Scottish Environment Protection Agency
SFL - Springfields Fuels Ltd
SIRO - Senior Information Risk Owner
SLC - Site Licence Company
SLCA - Site Licence Company Agreement
SME - Small and Medium-sized Enterprises
THORP - Thermal Oxide Reprocessing Plant
UKGI - UK Government Investments

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Appendix A -

Nuclear Provision

THE NUCLEAR PROVISION -
THE COST OF CLEANING UP THE UK'S HISTORIC NUCLEAR LEGACY

Estimating Uncertainty

Estimates are classified according to the level of certainty, with ranges applied to reflect this. The NDA estate uses 4 different classes of estimate (A to D) in line with the principles of the HMT Green Book with A being the most certain, and D the least - credible outcomes for the latter could range from -50% to +300%. 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.

Future Uncertainties

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 delivery, 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.

Basis of Estimate - Sellafield

At Sellafield the nuclear provision estimate combines the cost projections from the new Performance Plan (known as PP14) with management estimates as to near term cost pressures and very long-term costs. 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 underlying undiscounted cost estimate for Sellafield (before adjustment for plutonium) has increased slightly during the year.

NDA Expenditure Profile

The first graph shows the undiscounted annual expenditure profile for future years (excluding NDA administrative and other non-programme costs, and some commercial costs), from lifetime 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 10 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.

What is the Nuclear Provision?

The nuclear provision is a single point number in the Statement of Financial Position which represents the discounted estimated cost of the decommissioning mission, calculated in accordance with Accounting Standards. It is important to understand the basis of this estimate and the inherent uncertainty around it, and therefore 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 based on an assumed inventory of materials, using strategies for retrieval and disposal over several decades. Each of these elements (quantity, method and time to treat) is uncertain in their own right, as is the cost of developing the necessary technology and plants to deal with these activities. The quality of the forecast becomes less certain as time goes out, and acceptable standards of clean up and end states may change.

Future Opportunities

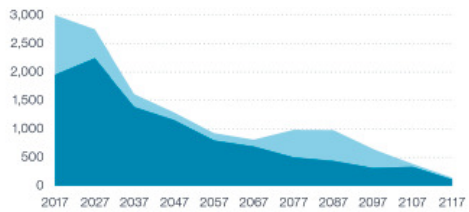
The Sellafield Performance Plan will continue to evolve in future years as the programme develops and individual projects progress. An example of this evolution is the change in strategy for the Magnox Swarf Storage Silo (MSSS) programme in which an alternative waste treatment solution has been proven 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.

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.

Basis of Estimate - Other sites

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 taxpayer has continued following the incorporation of anticipated savings from the Magnox/RSRL competition.

Total Expenditure Profile £m



Appendix A -

Nuclear Provision

Uncertainty Range - Sellafield

The single point undiscounted estimate is **£89.6 billion.**

Examples of uncertainty around this figure:
A 100% increase in major project costs post 2034 +£24.8 billion
A 300% increase in major project costs post 2034, +£74.3 billion
A 50% reduction in major project costs post 2034, -£12.4 billion

Undiscounted Nuclear Provision - Sellafield

£89.6 billion
(2015/16, £88.3 billion)

Uncertainty Range - Other sites

The single point undiscounted estimate is **£29.4 billion.**

Examples of uncertainty around this figure:
A 100% increase in Magnox final site clearance costs, +£10.0 billion
A 3 year delay to DSRL Interim End State date, +£0.5 billion
A 300% increase in GDF costs post 2037, +£22.5 billion
A 50% reduction in GDF costs post 2037, -£3.8 billion

Undiscounted Nuclear Provision - Other sites

£29.4 billion
(2015/16, £29.1 billion)

Uncertainty Range - Total

The NDA estimates the total costs associated with the undiscounted nuclear provision to be within a potential range from **£97 billion** to **£222 billion.**

The nuclear provision 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.
The current undiscounted nuclear provision is **£119.0 billion.**

Undiscounted Nuclear Provision - Total

£119.0 billion
(2015/16, £117.4 billion)

Discount Rate Sensitivity

A 0.5% decrease in the discount rates over the life of the estimate would increase the provision by approximately **£40 billion** while a 0.5% increase would reduce the provision by approximately **£29 billion.**

Discounting

The nuclear provision estimate is discounted (adjusted to present values) to produce the figure published in the accounts.

Until 2011/2012, the discount rate for provisions was 2.2% per annum which meant that the overall 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 2012/13 followed by the introduction of negative rates for long-term expenditure in 2015/16.

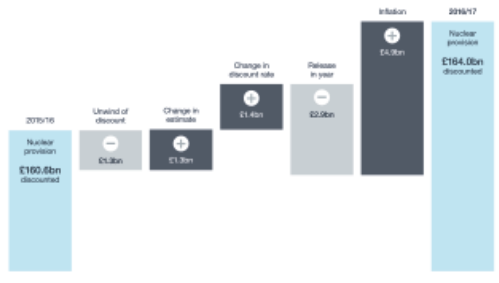
Short and medium-term rates are revised each year by HM Treasury to reflect the UK government's real terms borrowing rate. The rates are currently:
Short-term (0-5 years) -2.70% ● Medium-term (6-10 years) -1.95%
Long-term (over 10 years) -0.80%.

The application of these rates produce the overall discounted total as shown in the Authority accounts of £164.0 billion.

Changes in Discounted Nuclear Provision

The discounted nuclear provision (Authority accounts) at the end of 2015/16 was **£160.6 billion** and movements since then have been: The value provided for 2016/17 released from the provision, **-£2.9 billion** increases from inflation **+£4.9 billion** and the unwinding of the existing discount, **-£1.3 billion**, which are applied to the provision every year, the impact of the changes in discount rates, **+£1.4 billion** and cost estimate changes which increase the obligated liability estimate by a net **+£1.3 billion**.

Movements in Nuclear Provision 2016-17 £bn



Discounted Nuclear Provision - Total (Authority)

£164.0 billion
(2015-16, £160.6 billion)

Appendix B -

NDA Estate – Summary of events confirmed as INES1 or higher during 2016/17

INES 1 events		
Magnox - Harwell	Incorrect transport package used for an ILW load despatched from Harwell to Sellafield. The error was discovered during a planned audit (Retrospective classification of an event in December 2015)	A routine physical inventory check determined that waste consigned to Sellafield in December 2015 included a drum containing Americium. Inclusion of this drum breached the limit for the type of packaging used for the consignment transport. Consequently, the transport packaging used was not rated to carry the drum. The package was received at the correct facility at Sellafield.
DSRL - Dounreay	Breach of Safety Management Requirements at LLW plant.	Operators failed to comply with operational limits for radioactive materials in waste packages destined for disposal in a LLW vault.
Sellafield	Unintentional exposure of a worker to a radioactive source used to test instruments in a cell.	The investigation of the incident identified inappropriate personal behaviours and poor safety culture. The operator did not receive a significant dose.
Sellafield	Ex Dounreay Exotics Fuel assembly dropped during a mechanical handling task at Sellafield.	Operators failed to follow the correct procedures to deal with the 'off-normal' condition of dropping the fuel assembly, which contained radioactive material.
DSRL - Dounreay	Dropping of a contaminated glovebox resulted in a release of radioactive contamination.	Analysis showed that the release breached the ionising radiation regulations. The operators received no dose, and there was no environmental impact.
Sellafield	Radioactive source exposure during cell maintenance.	During maintenance of a cell where radiation instruments are calibrated, a fault exposed a radioactive source while the cell door was open. The cell gamma alarm sounded, and a dose rate of 1mSv/hr was measured at the calibration table. No-one was in the cell at the time, or in a position to be exposed to radiation from the source.

INES 2 events		
Sellafield	The personal dosimeters of 2 radiographers alarmed on high radiation when they exposed an inspection source.	Two radiographers were using x-ray equipment and digital image plates to inspect the contents of crates containing radioactive waste, housed in a room in a redundant facility. Both radiographers made separate entries to the room to reposition the imaging plate, and on each occasion, their Electronic Personal Dosimeter (EPD) went into alarm. A reconstruction concluded that radiation measured on the EPDs was due to x-rays, not from background radiation in the cell, or the crates. Neither of the radiographers received significant radiation doses.
Sellafield	Personal contamination – worker received a dose to their hand in excess of the legal limit.	Following a routine sampling activity, contamination was found on the finger of a Shift Team Leader. This contamination was removed using the standard procedure. The Shift Team Leader received a hand dose of approximately twice the legal limit of 500 mSv.
Sellafield	Personal contamination – worker received a whole body dose in excess of the legal limit.	During reinstallation of a glovebox sump probe, the operator sustained a contaminated wound, which caused an internal radiation exposure. Medical intervention was required to remove the contamination. The operator received an internal dose of approximately 80 mSv, which is 4 times the equivalent annual limit for whole body effective dose of 20 mSv.

Process notes

- It is the SLCs' duty to report and investigate events on the site, to take action to control risks, and prevent recurrence. However, NDA takes the safety of people working with radiation seriously and we have, working with the SLCs concerned, reviewed all of the above. We were content that SLCs had carried out a proper investigation, and learned from what had happened.
- Events are given a provisional INES rating by the SLC
- The provisionally rated event is referred to the National Officer (an ONR Inspector), who decides the final rating reported to IAEA
- The latest information on INES events can be found at https://www-news.iaea.org/

Appendix C -

Major Projects Cost and Schedule

Project/Programme	Year initiated	Estimated cost at initiation	Date passed design gate	Estimated cost at design gate (£m)	Estimated cost Sept 2015 (£m)	Estimated cost Mar 2017 (£m)	Estimated cost end date at initiation	Estimated end date at design gate	Estimated end date Sept 2015	Estimated end date Mar 2017
First Generation Magnox Storage Pond (FGMSP) - export	2006	43	Jan 2013	121	121	**119**	Jul 2009	Oct 2016	Oct 2016	**Oct 2016**
Key reasons for changes to cost and/or end date from year initiated to March 2017 Changes in site strategy and funding priorities which also increased the cost of delivering the project. Other increases in cost and schedule have been associated with the complexity of refurbishing an existing radioactively contaminated facility on a highly constrained site adjacent to a sensitive nuclear facility as well as project performance issues.										
FGMSP - Bulk Sludge and Fuel Retrievals	2004	229	Apr 2014	400	380	**340**	Dec 2012	Dec 2018	Dec 2018	**Nov 2019**
Key reasons for changes to cost and/or end date from year initiated to March 2017 Complexity of installing new equipment into an existing radioactively contaminated and sensitive nuclear facility as well as project performance issues.										
Magnox Swarf Storage Silo (MSSS) - Retrievals	-	-	Mar 2007	243	843	**843**	-	Apr 2015	Sept 2023	**Sept 2023**
Key reasons for changes to cost and/or end date from year initiated to March 2017 The need for revisions to methodology and design, and that plans are now more realistic engineering plans, reflecting the complexity of the final build and a better understanding of the installation process. The general trend is one of reducing cost at the present time as opportunities are realised to simplify the design of SEP3 and risks associated with on-site installation activities are mitigated. However, significant risks remain and MSSS is a complex and constrained working environment therefore overall outturn costs have been left unchanged at the present time.										
MSSS - Silo Maintenance Facility	2006	180	Oct 2013	247	247	**254.7**	Oct 2011	Jul 2018	Jul 2018	**Jul 2019**
Key reasons for changes to cost and/or end date from year initiated to March 2017 Escalation that was not included in the original business case, a decision to defer some early procurement activities in FY15/16, contractor performance, and inclusion of additional scope associated with the alternative waste management approach. The completion date is unchanged.										
MSSS - Box Encapsulation Plant	2014	615	-	-	869	**869**	Jan 2021	-	Apr 2023	**Apr 2023**
Key reasons for changes to cost and/or end date from year initiated to March 2017 Changes in scope and design along with different commercial arrangements than had been originally envisaged. Price increases on long-lead time, machinery and equipment is also a factor. The final business case is currently being prepared to seek sanction of the project through to completion. Current indications are that the project cost and schedule remain within the ranges stated in the last business case including the scope changes associated with the change in waste management strategy.										

Appendix C -

Major Projects Cost and Schedule

Project/Programme	Year initiated	Estimated cost at initiation	Date passed design gate	Estimated cost at design gate (£m)	Estimated cost Sept 2015 (£m)	Estimated cost Mar 2017 (£m)	Estimated cost end date at initiation	Estimated end date at design gate	Estimated end date Sept 2015	Estimated end date Mar 2017
Pile Fuel Cladding Silo (PFCS) - Retrievals	2005	495	-	-	836	**601**	Oct 2019	-	Apr 2023	**Apr 2021**

Key reasons for changes to cost and/or end date from year initiated to March 2017
In mid-2013 difficulties with the technical complexity of the planned design led to a review of the proposed solution. This resulted in a revised approach which required the redesign of the waste retrievals and handling equipment, increasing the cost and schedule.

The revised business case approved by Government in September 2016 provided a revised cost and schedule reflecting the simplified approach. This has improved the cost and schedule, with further opportunities for simplification agreed subsequently. Retrievals are scheduled to commence in January 2021.

PFCS - Box Encapsulation Plant Product Store - Direct Import Facility	2006	119	-	-	291	**291**	Jan 2019	-	Mar 2020	**Mar 2020**

Key reasons for changes to cost and/or end date from year initiated to March 2017
The project has completed concept design and awarded a design and build contract for the completion of the project. This has improved understanding of the scope to complete the project, and the cost and schedule for the works. The latest cost and schedule reflects the target cost contract value, overall project schedule as well as works provided by Sellafield and other sub-contractors.

Sellafield Product and Residue Retreatment Plant	2015	494	-	-	494	**482**	Nov 2026	-	Nov 2026	**Apr 2027**

Key reasons for changes to cost and/or end date from year initiated to March 2017
Since the previous submission of the Initial Business Case (August 2015), the project range of £129m - £494m has developed and matured during the Concept Design phase. The inclusion of Dounreay feedstock has been incorporated into the project scope and the process building volume has increased. Welfare facilities and a tank farm have increased the scope and the estimate has been revisited on a “bottom up” approach as opposed to previous parametric / volume estimates.

Separation Ventilation Area	-	-	Aug 2008	144	249	**244**	-	Aug 2011	Nov 2016	**Dec 2016**

Key reasons for changes to cost and/or end date from year initiated to March 2017
Initially increased due to additional design and construction scope to recover from early design weaknesses including poor ground conditions, cable re-routing and protection to plutonium liquor lines. Re-work was required during design and construction to overcome the immature design and clashes during installation. Underestimation of the duration and logistics associated with working in the Separation area which included design and construction durations, scaffolding and crane requirements as well as resources.

Evaporator D	-	-	Aug 2009	409	740	**750**	-	Jul 2014	Dec 2017	**Dec 2017**

Key reasons for changes to cost and/or end date from year initiated to March 2017
initially increased due to work undertaken on seismic and stress analysis resulting in amended specification requirements and delays in release of design information. Supply chain performance and quality issues have resulted in subsequent schedule and cost impacts. Transfer of incomplete modules to site, a constrained working environment and industrial action have resulted in ongoing construction and commissioning productivity being below that required to meet the original schedule.

Existing systems didn’t meet expected performance, therefore additional engineering was required to resolve this. Ongoing lack of efficiency in final construction activities further impacted the delivery of the project.

Appendix C -

Major Projects Cost and Schedule

Project/Programme	Year initiated	Estimated cost at initiation	Date passed design gate	Estimated cost at design gate (£m)	Estimated cost Sept 2015 (£m)	Estimated cost Mar 2017 (£m)	Estimated cost end date at initiation	Estimated end date at design gate	Estimated end date Sept 2015	Estimated end date Mar 2017
SIXEP Contingency Plant	2014	394	-	-	394	**417**	Nov 2024	-	Nov 2024	**Nov 2025**
Key reasons for changes to cost and/or end date from initiation to March 2017 This project is in an early phase and as a consequence the estimates continue to mature. The SCP project will submit an updated business case in 2017/18 with a revised P80 cost / schedule taking into account a revised project delivery position.										
Dounreay Decommissioning Programme	2012	1,552	-	-	2,280	**2,328**	Jan 2025	-	Oct 2029	**Oct 2029**
Key reasons for changes to cost and/or end date from year initiated to March 2017 Primarily due to additional exotic fuels work, further security enhancements and design for an extension to the Dounreay Cementation Plant Intermediate Level Waste store. *Due to the transfer of exotic fuels from Dounreay to Sellafield the indicated cost and date are under further review, which it is expected will complete by March 2018.										
National Low Level Waste (LLW) Programme	2011	1,750	-	-	1,750	**1,750**	Mar 2030	-	Mar 2030	**Mar 2030**
No change in overall National LLW Programme										
Magnox Decommissioning Programme	Sept 2014	5,537	-	-	-	**5,551**	Nov 2028	-	-	**Nov 2028**
Key reasons for changes to cost and/or end date from year initiated to March 2017 The programme cost included in the table above has been extracted from the Lifetime Plan (LTP) and is to the point at which all sites will have entered their interim states, prior to a period of quiescence known as Care and Maintenance. The cost at initiation and the current estimated cost is broadly the same. This is not unexpected as the work is being delivered in line with the plan cost.										
Berkeley Vault Retrievals	2011	212	May 2013	245	297	**259**	Mar 2015	Jun 2018	Apr 2020	**Nov 2021**
Key reasons for changes to cost and/or end date from year initiated to March 2017 In September 2014, there was a change in the Parent Body Organisation (PBO) and with this an alternative waste management strategy for encapsulation using 6m3 concrete boxes and appropriate interim storage. The original baseline LTP for Berkeley based on conditioning and use of Ductile Cast Iron Containers (DCICs) was replaced in March 2016 with a new Performance Plan implementing the PBO bid strategy.										

NOTE: The historic cost estimates in the table above are expressed in the money values of the year in which the estimate was prepared (i.e. have not subsequently been adjusted for inflation).

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