

The logo for the Nuclear Decommissioning Authority (NDA) features the letters 'NDA' in a bold, white, sans-serif font. A horizontal line extends from the right side of the 'A' across the page.

Nuclear  
Decommissioning  
Authority

# Annual Report & Accounts

## **2017/18**



# Annual Report and Accounts **2017/18**

Report presented to Parliament pursuant to Section 14 (6) of the Energy Act 2004 and Accounts presented to Parliament pursuant to Section 26 (10) of the Energy Act 2004.

Report laid before the Scottish Parliament pursuant to Section 14 (8) of the Energy Act 2004 and Accounts laid before the Scottish Parliament pursuant to Section 26 (11) of the Energy Act 2004.

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# Performance Report

**TOM SMITH**  
Chairman

# Chairman's Statement



I embark on my second year as Chairman amid a time of change and improvement for our organisation, as well as significant breakthroughs in tackling some of our major hazards following many years of preparatory work.

## Our performance

Our role in cleaning up the legacy from the UK's first generation of nuclear facilities remains a vitally important task for the nation, and we are committed to pursuing our mission with an absolute focus on safety and environmental responsibility.

I am pleased that the government acknowledges the significance of our mission with ongoing public funding, which rightly requires us to manage our budget with care, ensuring maximum benefit for the taxpayer.

Our on-the-ground activities have been carried out effectively. Spending has remained below the annual limit set by government, and excellent progress has been made on some of our highly hazardous facilities at Sellafield and Dounreay. Bradwell will be the first of our Magnox reactors to enter the passive care and maintenance phase towards the end of this year.

At all of our 17 sites, I am impressed by the all-round commitment to push forward with decommissioning work, and by the passion for solving challenges that shines through as I meet members of the workforce.

It is also clear to me that many people who live and work around our sites are very supportive of the mission, but rightly continue to scrutinise and challenge our performance. Equally, I am struck

by the strong partnerships with local communities. These enable us to work constructively in allocating funding from our socio-economic budget to joint initiatives aimed at sustaining economies, helping to prepare communities for the eventual loss of a major employer.

The Group's safety record has also improved after last year's increase in incidents, and the Board wants to see continuing progress in this priority area.

## Magnox inquiries

During the year, reports on our failings in the Magnox procurement were published by the National Audit Office and the Public Accounts Committee, while the independent Magnox Inquiry published interim findings. All have highlighted the shortcomings in our approach to awarding the Magnox contract and failures in the post-contract award consolidation phase.

We have embarked on a period of careful analysis of our strengths and weaknesses, particularly those that contributed to the Magnox failings. This will continue for some time yet, beyond the publication of the final Magnox Inquiry report.

We are determined to emerge as a more effective, efficient and capable organisation. To achieve that, we need both to adopt the recommendations from independent scrutiny and to implement the internal cultural and organisational changes we are currently

making under the leadership of our Board, CEO David Peattie and the Executive Team.

## Board changes

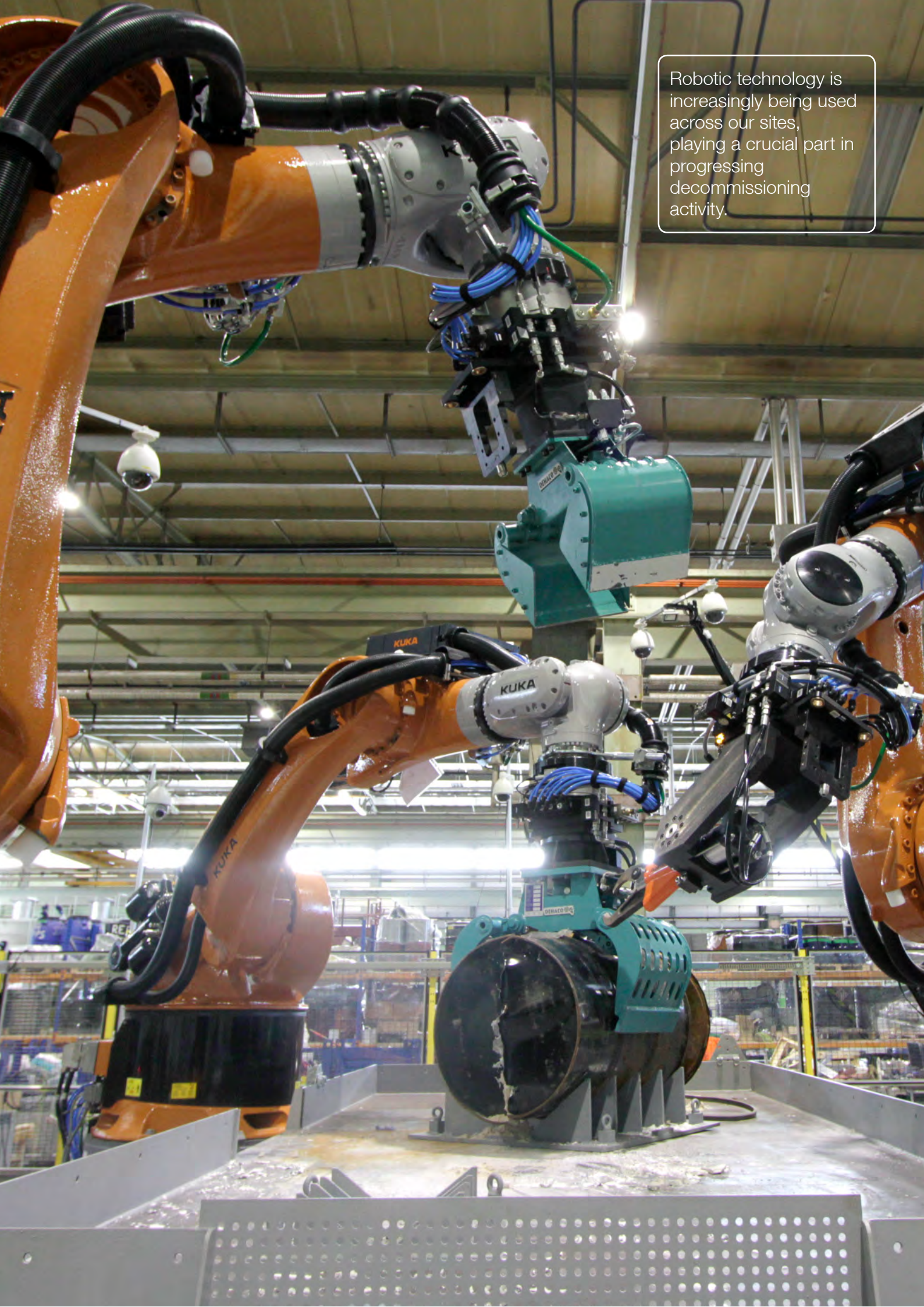
I welcome Candida Morley to the Board as a new non-executive director. Candida joined us as a representative from our shareholder UKGI in November 2017.

## Thanks

I would like to close by thanking everyone involved in the NDA mission, including the workforce, our regulators, government sponsors and the many stakeholders who live around our sites. We depend on their continued support and challenge to carry out our work, and look forward to continuing our many partnerships in pursuit of our nuclear clean-up mission.

**Tom Smith**  
NDA Chairman





Robotic technology is increasingly being used across our sites, playing a crucial part in progressing decommissioning activity.



DAVID PEATTIE  
Chief Executive Officer

# Chief Executive's Review



I am pleased to write the foreword to this year's Annual Report after my first full year as Chief Executive of the Nuclear Decommissioning Authority.

## The NDA was established in 2005 to oversee the safe and efficient clean-up of the nation's nuclear legacy.

Our mission remains unchanged, as does the relentless focus on cleaning up and decommissioning the UK's civil nuclear sites and delivering value for the taxpayer, with the safety and security of people and the environment at the forefront of our minds.

My vision now is to build a stronger NDA Group, where all parts of our business are working together with a collective focus on delivering the mission more efficiently. Changes to the way we work and manage ourselves will be the most significant since our organisation was created in 2005.

These changes will incorporate learning from the Magnox competition and contract, but their main aim will be to improve delivery and provide a foundation for long-term success.

Throughout this time of challenge and change, our skilled and professional workforce has remained focused on delivering the mission, reaching some important milestones during last year.

For the very first time at Sellafield, our largest and most complex site, we're beginning to retrieve radioactive waste from parts of the site that date back to the very beginning of the nuclear industry.

At Dounreay, a vital programme began to remove metallic casings that have been held for decades in the Dounreay Fast Reactor. Decommissioning the reactors is a major step towards cleaning up and ultimately closing the site.

Over the next year the Magnox site in Bradwell, Essex, will become the first NDA site to enter a state of care and maintenance after all mobile hazards, and the vast majority of the buildings, have been cleared.

I am pleased to report that last year we continued to make good progress in the transfer of spent nuclear fuel from some of our other sites to Sellafield, where it can be safely managed in the most appropriate way.

Spending was kept below the annual limit set by government and we exceeded revenue targets, generating £1.2 billion of revenue to offset significant taxpayer contributions of £2.1 billion. This is a result of some outstanding work by our commercial colleagues around the businesses for which I am grateful.

Last year's safety statistics were the best we have seen for three years. I'd like to thank everyone who has responded to the demand for improved safety performance.

As I visit our sites, from the very north of Scotland to the far south of England, I am constantly impressed by the expertise and dedication of our workforce.

Our work is dependent on collaboration, not just with our sites and supply chain, but with our government department, regulators, stakeholders and crucially our communities. We are grateful for their continued support and look forward to accepting their challenge of continuing to work in partnership.

With support also comes scrutiny, which is only right and proper for a public sector organisation, and this year has seen

unprecedented levels of interest as a result of the Magnox competition and contract. An independent inquiry into the issues is expected to conclude later this year. We will welcome its findings as a further opportunity to learn from the mistakes and ensure they cannot happen again.

In building a stronger NDA, I made three key executive appointments last year. Kate Ellis joined as Commercial Director, bringing a wealth of commercial experience from previous roles with the Ministry of Justice and BP. Neil Hewlett was appointed as General Counsel to offer valuable legal advice to the Executive and Board and, most recently, Alan Cumming took up the new position of Director of Nuclear Operations. Alan brings extensive experience in nuclear, waste and petrochemicals.

Priorities for the coming year include establishing new arrangements for managing the work at the Magnox sites, following the planned termination of CFP in September 2019, completing preparations for the start of the siting process for a national geological disposal facility for radioactive wastes, Bradwell entering care and maintenance, concluding the movement of materials from Dounreay to Sellafield, and removing the final piece of Magnox fuel from the last Magnox reactor at Wylfa, on Anglesey in North Wales.

It will be another busy year and I thank you in advance for your continued support.

**David Peattie**  
Accounting Officer and  
Chief Executive Officer  
26 June 2018

# The NDA Group

## 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 England, Wales and Scotland, some dating back to the 1940s, plus associated liabilities and assets. This includes the first generation of Magnox power stations, various research and fuel facilities and our largest, most complex site, Sellafield.

Taking a group-wide view, our core objective is to decommission these sites safely, securely, cost-effectively and in a manner that protects the environment.

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

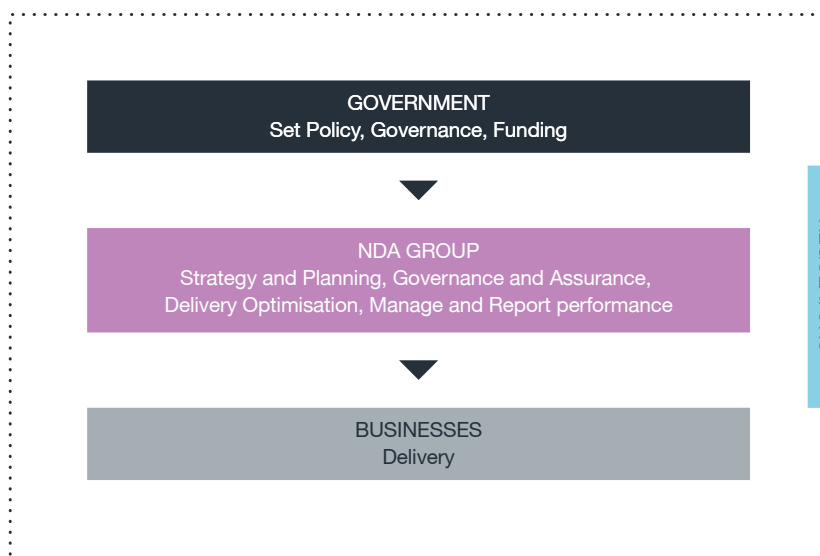
We also have a range of supplementary responsibilities including developing the supply chain, research and development, skills, socio-economic support for local communities and stakeholder engagement.

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 projected income, will enable us to continue making broad progress across the Group.

We are committed to maximising efficiencies, along with all public sector organisations, and are taking measures to save £1 billion over this 5-year period.

This will be achieved through technical and programme innovations and efficiency improvements.

## Operating structure



The diagram indicates the organisational structure within the Group. See page 12 for a more detailed illustration of the estate structure and the organisations covered by this Annual Report and Accounts.

## How the Group operates

The NDA is a non-departmental public body (NDPB) created through the Energy Act 2004 and sponsored by the Department for Business, Energy and Industrial Strategy (BEIS).

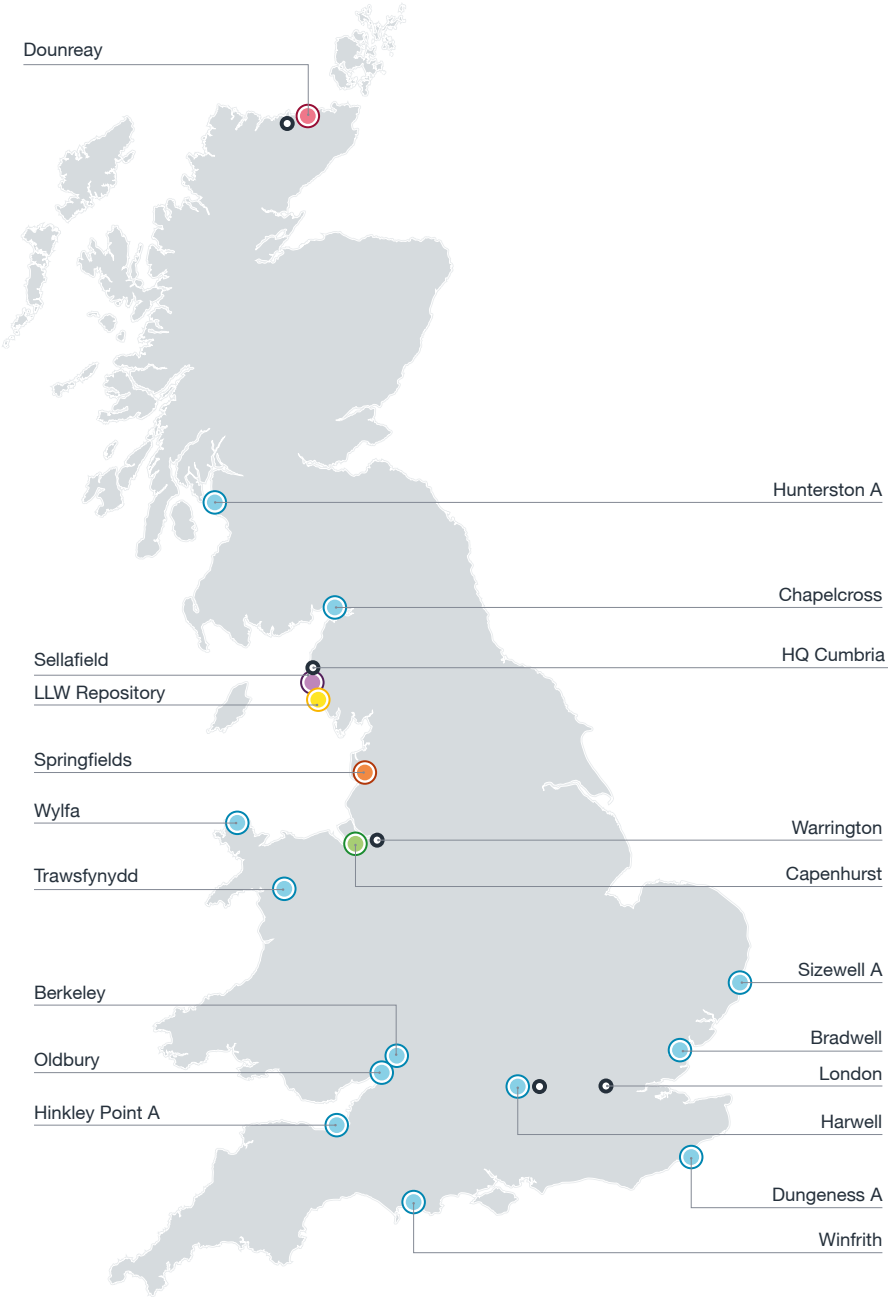
Our plans must be approved by the Department and Scottish Ministers, who also provide a policy framework for the NDA.

- Site activities are closely regulated by:
- the Office for Nuclear Regulation (ONR)
  - the Environment Agency (EA)
  - the Scottish Environment Protection Agency (SEPA)
  - Natural Resources Wales (NRW)
  - Department for Transport (DfT).

Their views are an important part of our considerations and we seek to involve them in open dialogue.



**The NDA estate**



**16,000**

Employees across the estate

**1,046**

Hectares of nuclear licensed land

**17**

Sites across the UK

**12**

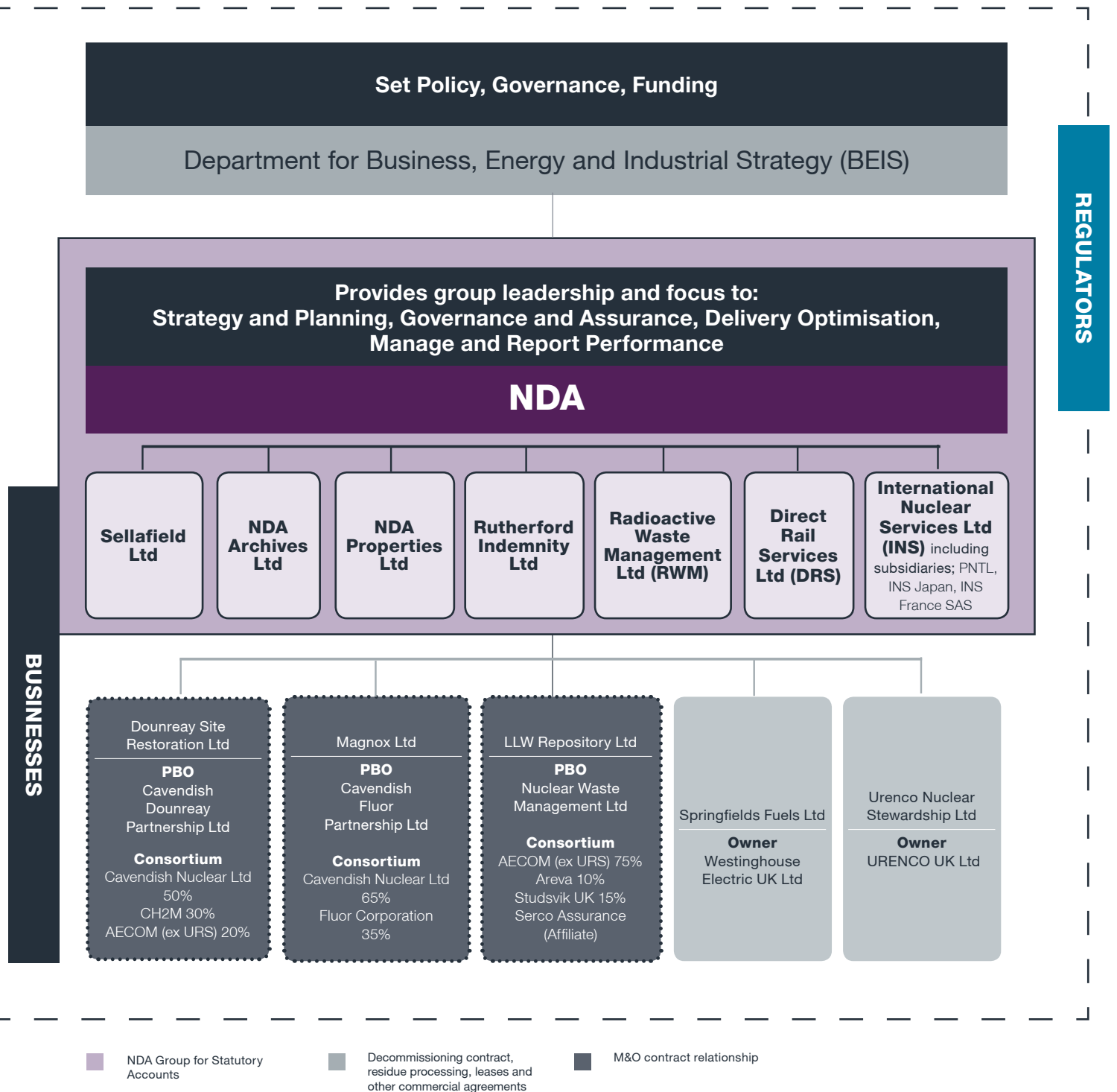
Businesses

For more detail on our businesses, see pages 109-124

**Businesses**

- Sellafeld Ltd
- Magnox Ltd
- Dounreay Site Restoration Ltd (DSRL)
- LLW Repository Ltd (LLWR)
- Springfields Fuels Ltd
- URENCO Nuclear Stewardship Ltd
- NDA offices
  - International Nuclear Services Ltd
  - Radioactive Waste Management Ltd
  - Direct Rail Services Ltd
  - Rutherford Indemnity Ltd
  - NDA Properties Ltd
  - NDA Archives Ltd

The NDA Estate and What We Do (continued)





# The NDA Corporate Centre

The NDA Corporate Centre, in its group leadership role, focuses on the following:

**Health, Safety, Security, Environment** – underpinning everything is our commitment to uphold the highest standards of health, safety, security and environmental responsibility, together with an open, transparent approach to secure the trust of our stakeholders.

**Strategy and Planning** – Our strategy, which is updated every 5 years, provides the framework for delivering our mission on behalf of government. Our plans set out how we will deliver the key outcomes required, in the right timeframe and within the funding agreed with government.

**Governance and Assurance** – Our governance regime discharges legal, regulatory and public service responsibilities to protect the interests of government and taxpayers, employees and stakeholders. We undertake appropriate assurance to ensure the NDA and our businesses deliver the outcomes required to achieve our mission.

**Delivery Optimisation** – We seek the optimum mix of businesses to deliver our mission. These range from PBO-led Site Licence Companies (SLCs) through to NDA-owned subsidiaries and affiliates. NDA's strategic overview enables optimised and prioritised Group-wide decisions over the short and long-term.

**Manage and Report Performance** – We conduct Quarterly Performance Review meetings with our businesses which drive discipline around targets, clarity around direction and culture and hold the businesses to account. We report to government and stakeholders on the performance of the businesses through various mechanisms including the Annual Report and Accounts.

To achieve our mission, we've adopted the principles of simplification, standardisation, discipline and focus in all we do.



The NDA Corporate Centre (continued)

The NDA Corporate Centre key activities 2017/18

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

The businesses are responsible for running day-to-day activities at site level, delivering progress for the NDA Group, while a range of businesses operate the specialist services needed to support our work.

This section covers progress towards key milestones and activities outlined in our 2017/20 Business Plan. Key milestones and activities are agreed at the start of each financial year and are grouped by strategic theme.

**Status description:**

<b>ACHIEVED</b>	The key milestone or activity has been achieved during the financial year 2017/2018 or satisfactory progress is being made towards achievement of longer term milestone.
<b>MISSED TARGET</b>	The key milestone or activity was due for completion before 31 March 2018 and as at that date there had been a delay against the planned schedule and the target has been missed.
<b>DEFERRED</b>	Activity deferred due to re-prioritisation and/or reallocation of funding.

Summary of Performance from 2017/20 Business Plan		
Target	Status	Comments
<b>Nuclear Materials</b>		
Work with government to develop a long-term management solution for separated plutonium in the UK.	ACHIEVED	
<b>Integrated Waste Management</b>		
Publish the Radioactive Waste Strategy.	ACHIEVED	
Alternative disposal routes integrated project.	ACHIEVED	
<b>Critical Enablers</b>		
Provide support to government on nuclear new build decommissioning plans.	ACHIEVED	
Magnox Limited, DSRL and LLWR - monitor performance against the targets and milestones selected.	ACHIEVED	
Ongoing performance tracking of the Sellafield Baseline Plan.	ACHIEVED	
Monitoring of delivery against the Sellafield Transformation programme.	ACHIEVED	
Implementation of our strategic people delivery plan to enable resource planning, skills development and flexibility and mobility across the estate.	ACHIEVED	
Support Small and Medium Enterprise organisations by increasing overall spend with them in line with the government Growth Agenda.	ACHIEVED	
Working to embed the capability to proactively protect, detect, respond and recover against current and evolving cyber threats.	ACHIEVED	
Publish a detailed socio-economic policy.	DEFERRED	A report on socio-economic spend in 2016/17 was published on our website. Policy will be updated in 2018/19.
<b>Regulatory Matters</b>		
Continue working with regulators and government to determine institutional controls appropriate to restoration of nuclear sites.	ACHIEVED	

See pages 109 to 124 for progress against 2017/20 Business Plan activities for our businesses.

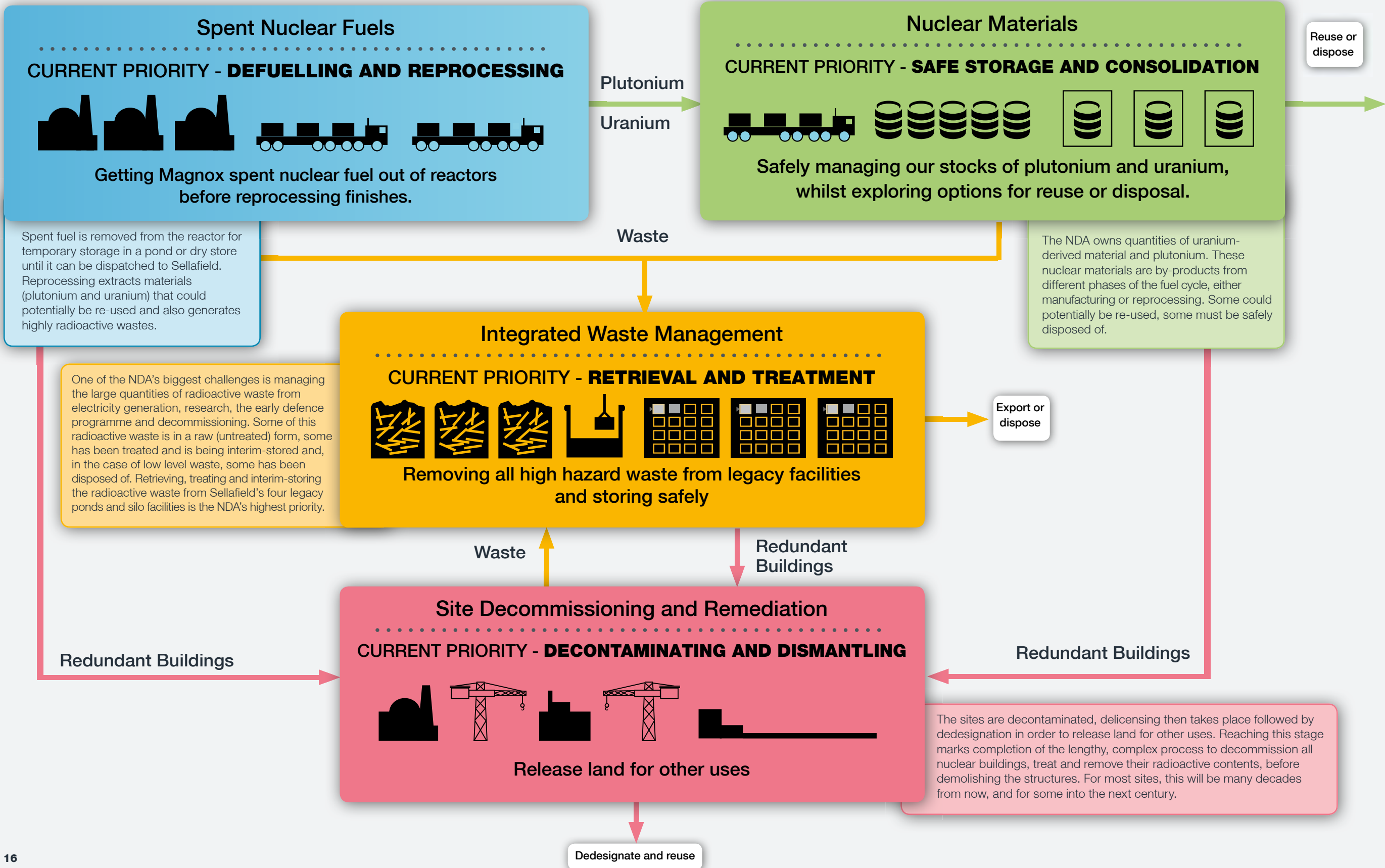
**Other key achievements for NDA Corporate Centre for 2017/18**

- achievement of a Waste Substitution deal with SOGIN of Italy, resulting in £182 million revenue to the taxpayer
- recruitment of additional capability for the Corporate Centre, in particular filling the new executive roles of Commercial Director, Director of Nuclear Operations and General Counsel
- agreement reached with Cavendish Fluor Partnership on the work to be performed on the Magnox sites during the contract's remaining 2 years to 31 August 2019
- support given to the Magnox Inquiry, 2 NAO reports and a PAC hearing in a professional and transparent manner
- third term of the PBO contract for LLWR awarded to UK Nuclear Waste Management Ltd
- support given to government in the development and implementation of a policy response to the UK's planned exit of Euratom to allow continuation of international nuclear commerce and UK safeguards
- official opening of Nucleus (The Nuclear and Caithness Archives) by The Princess Royal

# The Mission - our challenge

Our mission is to deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean-up and waste management, decommissioning 17 nuclear sites across the UK. We break down the mission into 4 key areas, enabling work to be clearly defined and prioritised, and where opportunities for efficiencies can be explored. These areas have numerous interdependencies.

However, the most urgent task is dealing with sites' highest hazard materials: **spent fuel, nuclear materials and highly radioactive wastes**. Once this inventory has been made safe, the redundant nuclear facilities can be dismantled and demolished.







## Pile Fuel Cladding Silo

Door frames being installed



SI016/2

The Year at a Glance

## Case studies

PRIORITY - RETRIEVALS

# Pile Fuel Cladding Silo

The Pile Fuel Cladding Silo (PFCS) is one of the oldest and most hazardous facilities at Sellafield. After extensive preparatory work spanning many years, the last 12 months have brought huge progress in laying the ground for the start of waste retrievals, now scheduled to start earlier than originally forecast.



**Main image to left** - A close up of the huge stainless steel doors that were installed on each compartment  
**Image bottom right** - Deflector plate clearance work on the side of the silo

Metallic radioactive waste has lain undisturbed inside the PFCS for around 50 years. When the 6 tall chambers were first constructed, just after World War 2, to receive spent fuel from the UK's experimental nuclear weapons programme, no-one even considered how they would be emptied or dismantled.

The 'cladding', or metal casings, accumulated over decades after being shaved off uranium fuel rods discharged from the Windscale Pile Reactors, and then later from Magnox power stations. Tipped in from the top, the PFCS was full by the 1960s and contains around 4,000 cubic metres of Intermediate Level Waste (ILW).

Gaining access to the sealed concrete compartments has been an incredible engineering journey involving years of planning and preparation, hundreds of dedicated people and many millions of pounds of investment.

The congested area around the 21-metre tall facility means engineering options are restricted. An extra complication is the atmosphere inside the silo, which is controlled by argon gas to reduce fire risk. The radiation hazard and argon atmosphere mean remotely operated equipment will be required for all the waste retrieval work.

A reinforced concrete superstructure has been built alongside the PFCS to manage all the work and enable the deployment of equipment.

In December 2017, the last of 6 holes was cut behind the massive stainless steel doors - each as heavy as 150 adults - that had been installed on each compartment during the previous year.

Cutting the holes and removing the concrete wall blocks will enable a retrievals system to reach in and lift out the waste.

**£250**million

Reduced project cost

**3**years

Earlier start to waste retrievals







## Bradwell

Cutting up the last delay monitoring tank at the Bradwell ponds.





## The Year at a Glance (continued)

**Case studies**

PRIORITY - DECONTAMINATION AND DEMOLITION

**Bradwell**

**Bradwell is in the final stages of preparations for the passive care and maintenance period, when all near-term decommissioning will be complete.**

**Main image to left** - An aerial view of Bradwell

**Top right** - Demolition of the former ponds complex

**Bottom right** - An employee working on the Fuel Element Debris (FED) treatment programme



More than 200 tonnes of metallic radioactive debris have been successfully dealt with at Bradwell, adding to the momentum that will take the site into the closed care and maintenance phase in 2018.

Bradwell will be the UK's first Magnox reactor site to reach this milestone, dormant, protected against the weather and awaiting final dismantling in around 80 years.

As part of preparations for care and maintenance, the metallic FED was subject to a range of treatments over a number of years.

The FED, classified as Intermediate Level Waste (ILW) consisted largely of the magnesium alloy cladding, shaved off the uranium fuel, plus associated springs and other metallic parts. The initial plan was to dissolve the FED in an acid solution at a purpose-built on-site plant, reducing volumes by 90% or more. This followed the successful introduction of a dissolution process at Dungeness A, where the technique was pioneered using the site's own FED and a different acid solution.

Technical issues delayed the process at Bradwell, however, 65 tonnes eventually underwent dissolution. Meanwhile, an innovative collaboration between Magnox Ltd, the Low Level Waste Repository Ltd (LLWR) and specialist contractor Tradebe-Inutec enabled 140 tonnes to be re-classified from ILW to LLW following

additional treatment, allowing it to be sent for disposal at LLWR.

Following completion of the FED programme, all ILW generated on-site has now been processed and is housed in the new Interim Storage Facility until a permanent disposal option is developed for the UK's higher-activity radioactive waste.

The combination of approaches has shortened the re-scheduled FED treatment programme, reducing hazards at the site. If remaining activities progress as forecast, it is now expected that Bradwell will enter care and maintenance in late 2018.

This huge achievement will mark the start of a progressive programme of Magnox sites reaching care and maintenance over the coming years.

A further major achievement at Bradwell was demolition of the complex associated with the spent fuel ponds, following a 4-year decontamination programme. The remaining pond buildings on the site will be encased in weatherproof cladding in preparation for care and maintenance. Both reactors have already been clad in weatherproof aluminium.

Bradwell will be only 3 years behind the ambitious 2015 target date, brought forward from 2027 and set as part of the Magnox Optimised Decommissioning Programme which aimed to accelerate timescales across the fleet of former power stations, with Bradwell being one of two 'lead and learn' sites.

**2018**

Only the 2 reactor buildings, the weather-proofed pond structures and ILW store will remain

**10** years

The remaining Magnox sites will all reach the care and maintenance stage in the next 10 years.





## Dounreay

Dounreay workers in the DFR



## The Year at a Glance (continued)

**Case studies**

PRIORITY - RETRIEVALS

# Dounreay

**Dounreay led the UK's post-war experiments with fast reactors, which were intended to breed new fuel while generating electricity. Work on fast breeder reactors was eventually discontinued and the site is now dealing with the legacy.**



**Main image to left** - An external view of the iconic Dounreay Fast Reactor (DFR)

**Top right** - Monitoring the breeder fuel removal in the DFR

**Bottom right** - Working in the Dounreay Encapsulation Plant

Work is now under way to overcome a decades-old challenge that has hampered decommissioning of the Dounreay Fast Reactor (DFR) in Scotland.

Decommissioning the 60-year-old DFR is one of the most technically challenging projects across the NDA Group.

When the sphere-shaped experimental reactor closed in 1977, most of the core uranium fuel was removed.

But follow-up work came to a halt when, in the zone surrounding the core, some metallic casings were found to be swollen and jammed. Almost 1,000 – around two-thirds of the total - had to be left in place. The stainless steel casings, known as breeder elements, contained natural uranium and were designed to produce more fuel for use in other reactors.

When the damage was discovered, decommissioning effectively stopped for 20 years. But fresh momentum was given to the task by the decision, in 1998, to close down Dounreay and the creation of the NDA a few years later.

After an exhaustive process to design and test equipment that must be operated remotely, the elements are finally being removed. This followed extensive research and development trials inside the plant and at a test rig on the outskirts of Thurso.

The removal work is expected to take about 3 years, allowing a start to be made on dismantling the landmark reactor, with completion estimated to be achieved by 2025.

Preparatory work included the destruction of almost 60 tonnes of highly reactive liquid metal coolant, in which the breeder elements were immersed. This difficult, hazardous programme took more than 10 years and required construction of a specially designed plant.

After removal, the elements are being transferred to a purpose-built facility, where they are cut open to remove the uranium, cleansed of any traces of liquid metal and packaged in containers for dispatch to Sellafield. About 40 tonnes of breeder elements recovered previously have already been sent to Sellafield.

**About the Dounreay Fast Reactor (DFR)**

When the DFR was built in the 1950s, there was a world-wide shortage of uranium for electricity generation.

It became the world's first fast reactor to provide electricity to a national grid, providing enough power for a small town like Thurso (population approximately 9,000).

DFR's reactor core was surrounded by a blanket of natural uranium elements that, when exposed to the effects of the radiation, would 'breed' to create a new fuel, plutonium. The UK government eventually decided, in the late 1980s, to phase out the fast breeder programme.

DFR was one of only two power-generating fast reactors ever built in the UK, both at Dounreay and its decommissioning is one of the most significant challenges in the UK today. When the breeder material is all removed, the reactor and its circuits will be dismantled, followed by final decontamination of the structures. The dome and associated structures will then be demolished.



## Innovation

LaserSnake - the laser-cutting robotic snake





The Year at a Glance (continued)

## Case studies

**PRIORITY** - DECONTAMINATING AND DEMOLITION

# Winfrith LaserSnake

**A laser-cutting robotic snake has been put to work on the highly radioactive core of a nuclear reactor for the very first time**

**Main image to left** - LaserSnake being lifted into place in the Dragon reactor  
**Top right** - LaserSnake cutting through metal casing



Using surgical precision, the long, flexible LaserSnake arm passed through a narrow opening to slice through a 400mm diameter vessel attached to the core of Winfrith's redundant Dragon reactor.

LaserSnake was called into action by the Winfrith team when it became clear that removing the waste gas heat exchanger, known as the Purge Gas Pre-Cooler (PGPC), would pose problems: one end was joined to the core in the high radiation area behind 3 metres of concrete shielding and steel plates, while the other end extended outside the shielding.

The flexible robotic snake, developed by OC Robotics and The Welding Institute with R&D funding from the NDA, seemed perfect: controlled from a distance by specialist operators, LaserSnake can squeeze through a small access hole, manoeuvre easily inside a very confined space and cut multiple layers with its high-powered laser. This allowed the work to be carried out inside the existing radiation shielding of the reactor.

Further research and trials were needed first, however. Although LaserSnake had been deployed to cut up Sellafield vessels, the thick pipework and complex internal geometry of the PGPC, as well as limited access from one side only, provided an additional challenge.

Two mock-ups were constructed enabling comprehensive testing and a series of rehearsals to take place, before

LaserSnake was installed outside the shielding to make the cuts, accessing the space via a 200mm drilled hole.

On site, less than 3 hours of actual cutting time was needed to free the PGPC from the reactor core, where it had been for 50 years. It was then carefully removed using rigging, pulleys and manpower.

Magnox Senior Project Manager Andy Philips said: "The ability of the LaserSnake to perform 'keyhole surgery' on the reactor core meant that the work could be carried out using existing protective shielding. This avoided the significant cost, of at least £200,000, plus around 4 weeks of time and the dose associated with building additional infrastructure, enabling us to remove this component earlier than originally planned.

"What's more, we believe it's the first time that laser-cutting technology has been deployed directly on the core of a nuclear reactor."

The NDA's Head of Technology Melanie Brownridge said: "This is an excellent example of how early NDA R&D funding support enabled the technology to grow from an exploration of whether laser-cutting could actually be adapted for nuclear into a system that, with further funding and collaborative working, is now mature and being successfully deployed on a number of our sites."

Dragon, a prototype high-temperature reactor cooled by helium, was developed in the 1960s as a joint European project involving 13 countries. After opening in 1964, it operated until 1975 when it was closed and defueled before being put into a passive care and maintenance regime. In 2011, decommissioning began in earnest. All that now remains is the reactor core contained in a pressure vessel surrounded by the concrete biological shield, 7 steel containment plates and an outer containment building.

Under the current programme, it is expected that the reactor core will be removed by 2021 and the facility demolished to ground level by 2022.





# Financial Overview



This year over £3 billion has been spent on tackling the nuclear legacy and good progress has been made across the NDA Group.

## Headlines

**£3.3 billion**

A total of £3.3 billion spent in the year.

**£1.2 billion**

£1.2 billion income.

**£2.1 billion**

Meaning a net total of £2.1 billion funded by the government.

**£70.1 billion**

Movements in provisions, other balance sheet items and adjustments.

**£72.2 billion**

Equals net comprehensive expenditure of £72.2 billion.

The NDA has again kept 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 £3.3 billion, making strong progress across the Group.

This year, through careful financial management we would have generated a budgetary surplus of £212 million. We have agreed with HM Treasury that £196 million of this will be carried forward to address budget pressures in future years, and the remaining £16 million has been returned to HM Treasury.

A change in the discount rates mandated by HM Treasury was the principal reason behind a £70 billion increase in the discounted nuclear provision. The underlying undiscounted provision has increased in the year by £2 billion.

We continue to drive value for money in our own expenditure, with the cost of running the NDA itself at £44 million. This represents 1.3% of the overall NDA budget and includes continued investment in research and socio-economic initiatives.

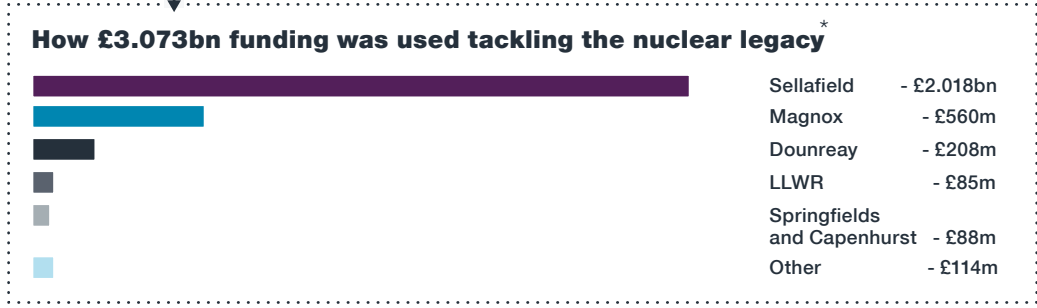
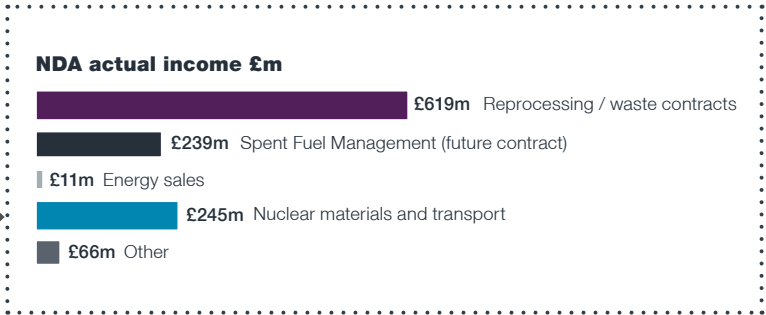
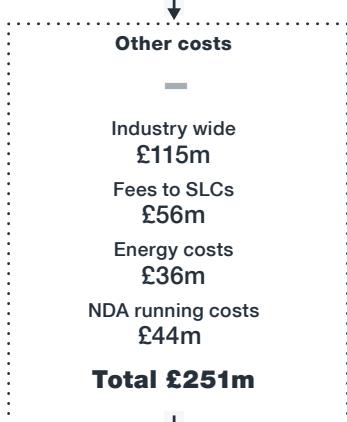
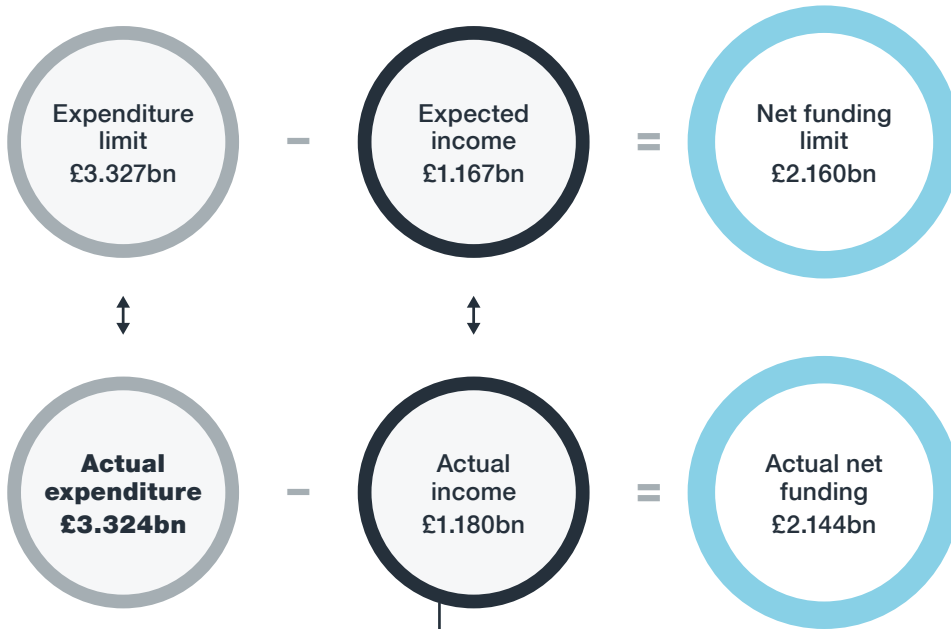
This figure can be expected to increase next year as the NDA starts to invest in new capacity and capability to improve oversight of expenditure and procurement across the Group.

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  
26 June 2018



**Performance against financial targets**



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

\*This includes commercial costs which are itemised separately in the graph on the following page.

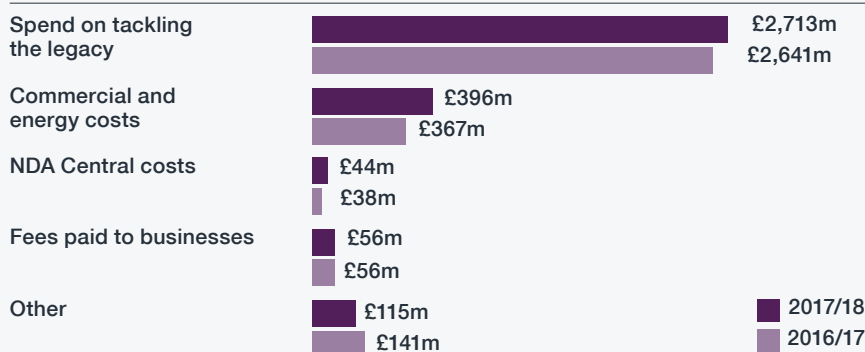
Financial Overview (continued)

## Financial Summary 2017/8

### NDA spend on tackling the legacy

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

#### Proportion of NDA spend on tackling the nuclear legacy £m

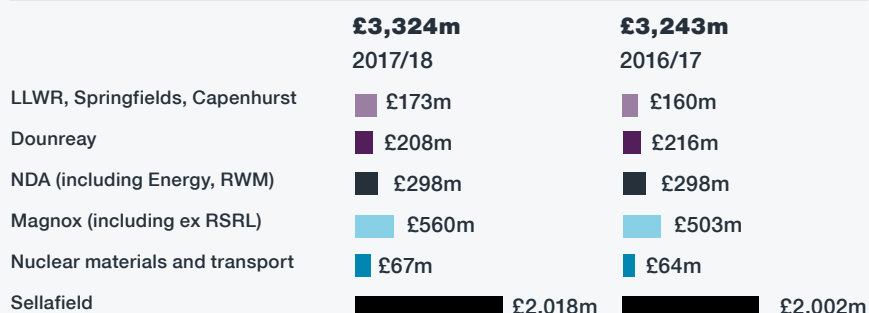


### NDA spend by business

Spend in 2017/18 was £3.3 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.

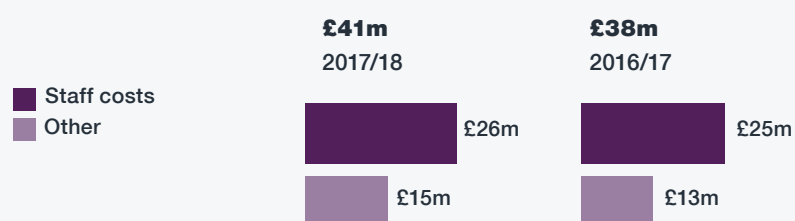
#### NDA spend by business or activity £m



### NDA Corporate Centre net spend

NDA's own net running costs were £41 million (2016/17 £38 million) after deduction of £3 million of income (2016/17 £3 million). This net spend represents around 1.2% of overall expenditure.

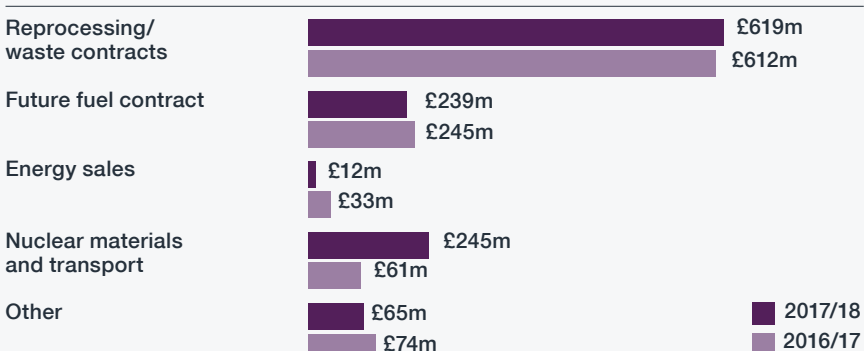
#### NDA HQ net spend £m



### NDA's income

NDA income was almost £1.2 billion in the year, with 73% arising from reprocessing and management of spent fuels and waste.

#### NDA income £m

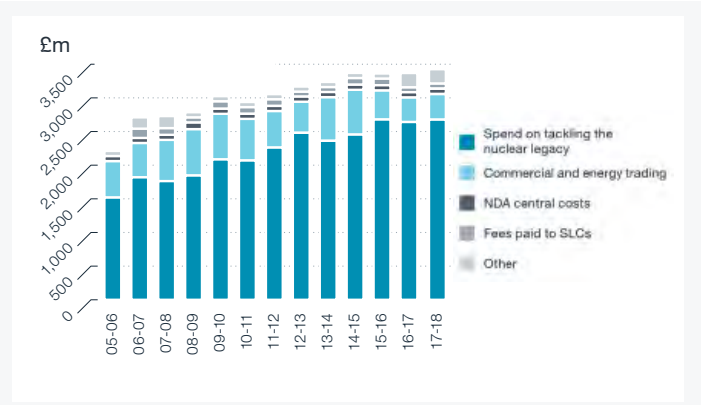


# Financial Summary - since 2005

## 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.

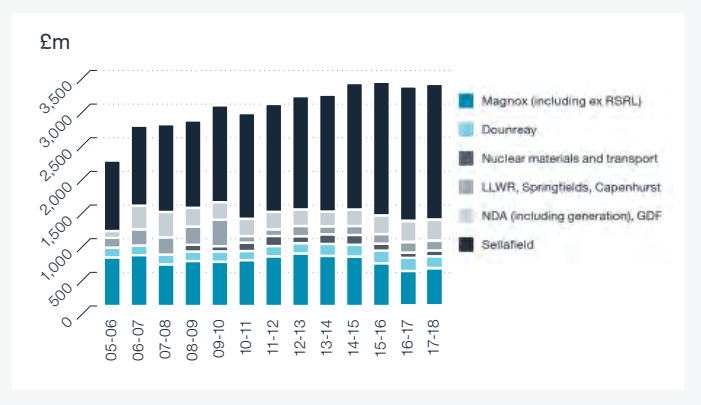
**Proportion of NDA spend on tackling the nuclear legacy since 2005**



## NDA spend by business

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

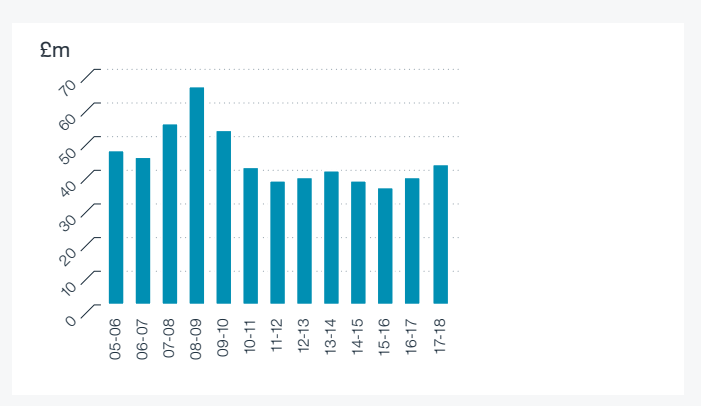
**NDA spend by business or activity since 2005**



## NDA Corporate Centre net spend

NDA's annual net running costs (after deduction of around £3 million of income) are in the region of £40 million.

**NDA Corporate Centre net spend since 2005**



## NDA's income

In recent years, electricity generation income has reduced. Reprocessing and management of spent fuels and waste are now 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 Group 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 its 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 pages 127 and 128.

### Changes in 2017/18 estimate - Authority

The key drivers in the change in value of the nuclear provision are inflation and discount rates.

The discounted nuclear provision at the end of 2016/17 was **£164.0 billion**. Since then the movements have been:

- the value provided for 2017/18 released to match work done - **£3.0 billion**
- increases due to inflation **+ £5.3 billion**
- unwinding of the existing discount applied to the provision every year - **£1.3 billion**
- the impact of the changes in discount rates **+ £66.0 billion**
- cost estimate changes which increase the liability estimate by a net **+ £3.1 billion**

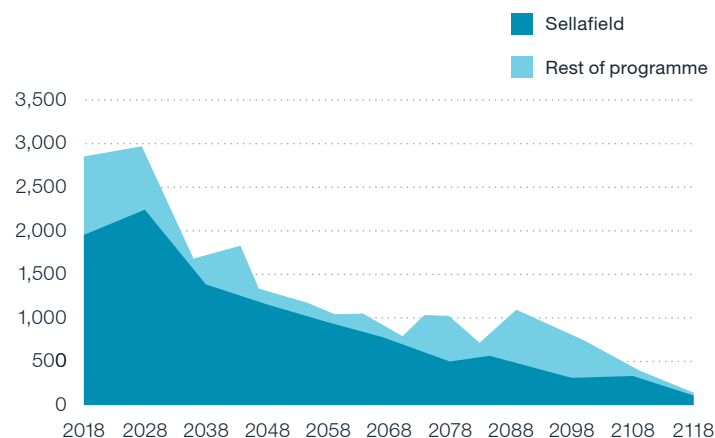
These movements bring the 2017/18 estimate to **£234.1 billion** discounted.







### 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 businesses.

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							Movement discounted	2017/18 undiscounted	2017/18 discounted
	2016/17 undiscounted	2016/17 discounted	Unwind of discount	Discount rate change	Released in year	Inflation	Other cost change			
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Magnox Limited	15,150	23,728	-219	13,873	-707	764	-673	13,038	14,667	36,766
Sellafield Limited	89,627	119,930	-912	42,179	-1,995	3,895	2,792	45,959	91,385	165,889
Dounreay Site Restoration Limited	2,378	2,697	-20	110	-182	86	0	-6	2,271	2,691
LLW Repository Limited	576	759	-7	235	-23	25	255	485	557	1,244
INS Contracts	43	52	0	9	0	2	-2	9	43	61
Springfields	595	881	-9	491	-39	28	141	612	681	1,493
Capenhurst	968	1,201	-11	288	-54	38	778	1,039	1,533	2,240
Geological Disposal Facility	9,655	14,750	-108	8,780	-32	483	-191	8,932	9,817	23,682
Authority	118,992	163,998	-1,286	65,965	-3,032	5,321	3,100	70,068	120,954	234,066
NDA Group companies	131	147	0	8	0	5	10	23	143	170
Group provision adjustment	-640	-640	0	0	0	0	-27	-27	-667	-667
<b>NDA Group</b>	<b>118,483</b>	<b>163,505</b>	<b>-1,286</b>	<b>65,973</b>	<b>-3,032</b>	<b>5,326</b>	<b>3,083</b>	<b>70,064</b>	<b>120,430</b>	<b>233,569</b>

# Health, Safety, Security, Safeguards and Environment Report

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 Group.

We expect good performance in environment, health, safety and security that reflects both international standards and policies, and relevant good practice from UK industry. While legal responsibilities rest with the businesses and contractors who work in the NDA Group, it is NDA's duty to have particular regard for the safety of people handling hazardous substances, the protection of the environment and security. We take our responsibilities seriously, and we hold those who fail to meet our expectations to account.

In addition, as the direct employer of some 220 people across multiple locations, we have responsibilities for the safety and wellbeing of our staff, the security of information that we use, and our own impact on the environment.

In November 2017, we launched the 'NDA HSE FLASH SHARE'. This is an alert system that is used to communicate HSE events to all NDA businesses.

## Safety performance in the NDA Group

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

On conventional safety, all parts of the Group saw improvements in safety performance. Accident rates (Recordable Incident Rate and RIDDOR events) were lower than last year, and we saw fewer events with the potential for serious injury.

In May 2018, we were advised by the Office for Nuclear Regulation (ONR) that they would prosecute Sellafield Ltd over an INES2 event (1 of 3 reported in 2016/17), where a worker was contaminated. While we were reassured that ONR's decision did not signal a change in regulatory strategy relating to Sellafield, the event and the outcome of the prosecution are clearly of concern, and we will monitor Sellafield's response. The INES scale is used to communicate the safety significance of events associated with sources of radiation. The INES rating is determined by the highest of 3 scores: off-site effects, on-site effects, and degradation of defence in depth. Defence in depth is a fundamental concept in nuclear safety where multiple, independent, redundant, layers of protection respond to failures. INES2 events have limited impact on people and the environment, but are judged more serious than INES1 'anomalies'.

Despite a serious chemical safety event at Sellafield, we are pleased to note generally high standards of process safety, good reporting and, following our second Health and Safety

Laboratory (HSL) Safety Climate Survey, improvement in safety culture.

## Sellafield

The site ended 2017/18 with a Recordable Incident Rate of 0.27 (0.29 in 2016/17) which compares well with the best performing private and public sector organisations of similar size. One event at the site was of particular concern. On 3 October 2017 a routine audit of a laboratory that handles radioactive materials found a partially filled 500ml bottle of Tetrahydrofuran (THF), a flammable chemical known to degrade over time into an unstable form. The chemical should have been disposed of one month after opening, but had been in storage for some years.

In the interests of safety, Sellafield sought expert assistance and Army Explosive Ordnance Disposal (EOD) attended site to destroy the THF with a controlled explosion. The event was subsequently rated INES1 (Anomaly).

We coordinated a search for similar chemicals at all NDA sites, including other organisations that share our sites, and, at the request of Springfields Fuels Ltd, Army EOD attended the Springfields site to destroy a different chemical.

It is very important that our businesses and NDA learn from these events and to reinforce our commitment to implementing an improved method of capturing and sharing HSE events.

## Dounreay

We are pleased to report that Dounreay Site Restoration Ltd (DSRL) responded positively to the challenges of last year, and that substantial improvements in safety and environmental performance have been achieved at the site.

As part of our oversight of Dounreay under the contracts in place between us and the operator, DSRL and its parent



Cavendish Dounreay Partnership (CDP), we worked with DSRL to improve health, safety and environmental performance at the site. Following Scottish Environment Protection Agency (SEPA's) feedback to us in March 2017, we asked DSRL and CDP to attend an NDA Board meeting in Scotland, to brief us on their plans to improve performance and meet an acceptable level of compliance. We followed this up later in 2017 with DSRL and CDP attending the Board Safety Committee, where they were again challenged to demonstrate improved performance. In the Autumn, members of the Committee, together with senior NDA executives, visited Dounreay to observe progress on the ground.

The NDA has an effective and transparent working relationship with SEPA and ONR, with the joint purpose of facilitating the safe delivery of decommissioning and clean-up of our sites in Scotland. We are not the operator and we do not engage formally with either body on regulatory matters – the site licence company DSRL has that relationship with them. However, we expect and require all our operators to be in full compliance and perform in a manner that meets or exceeds good practice, and we will continue scrutiny until we are convinced that further improvements have been made and can be sustained.

### **Magnox**

Magnox sustained improvements in safety performance and at the end of the year, the Recordable Incident Rate was 0.31, a 60% improvement on the recorded rate at the end of 2016/17.

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. Magnox has responded to ONR's Improvement Notice on the Wylfa site (January 2017), requiring improvements in the management of asbestos and has engaged well with NDA's detailed audit of asbestos management. 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)**

LLWR maintained its safety performance through initiatives such as the 'Perfect Day' principle, which combines safety with work delivery and management effectiveness. However, towards the end of the year, performance against LLWR's own metrics deteriorated. There were no serious injuries, but action has been taken to improve performance, and we will continue to hold LLWR to account.

### **Subsidiaries**

Other businesses demonstrated good safety performance throughout the year.

We repeated the Group HSL Safety Climate Survey during 2017/18 and we will use the results to inform our approach

to the assurance of safety, and the development of our environment, health and safety strategy.

### **Security Performance in the NDA Group**

Security remains a key focus in the UK civil nuclear sector and the NDA Group has continued to play a major part in the protection of nuclear and other radiological material. The Group has capitalised on work commenced in previous years to further improve both security and resilience capabilities.

Improvements have been made through a collaborative approach involving key stakeholders such as BEIS, Home Office, ONR, Civil Nuclear Security (CNS) and Civil Nuclear Constabulary (CNC). Interactions have also taken place with local resilience forums, blue light responders, British Transport Police (BTP), Ministry of Defence (MOD) and the wider civil nuclear sector organisations. Such collaboration has allowed a greater emphasis on shared learning and operations to support security and resilience.

Specific deliverables include:

**a. The NDA's Cyber Security and Resilience Programme (CSR):** NDA Cyber Security Programme is fully aligned with the National Cyber Security Strategy and BEIS. This includes supporting development of UK Cyber Security talent by creating Cumbria's first cyber lab, and establishing the first cohort of apprentices for NDA's businesses.

**b. Supply Chain Security:** The NDA continues to lead the industry in the development of an aligned approach to ensuring information shared in the supply chain is sufficiently protected in line with its classification. We are also simplifying the process for companies gaining contracts in the nuclear industry.

**c. Alignment of Security and Resilience (S and R) Group Strategy:** The initiation of collaborative Security and Resilience forums has created economies of learning and brought the NDA S and R family together. The creation of an agreed strategy seeks to capitalise on economies of scale and scope, delivering value for money.

**d. Improved performance and accountability:** S and R assurance and accountability continues to develop through continuous learning. Improvements in this area are now under way following a variety of initiatives such as the creation of meaningful metrics to measure performance.

**e. Culture and the Human Factor:** Human factor experts have conducted a series of interviews across the Group to explore the underlying factors that influence security delivery. This work will guide improvement plans to further enhance the Group's nuclear security.

**f. Group Security Improvement projects:** Security enhancements continue through the Group with National Nuclear Archive providing greater information security. Off-Site

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

Command Facility (OSCF) and the Multi-Services Command Facility (MSCF) provide greater capability and resilience.

The individual businesses have had a demanding year but overall maintained professional S and R functions. The work initiated in 2017 will continue to improve the Group's S&R capabilities.

### Environmental Performance in the NDA Group

The NDA measures environmental performance as the number of non-compliances with environmental permits. In 2017/18, the Group reported 59 non-compliances, which is broadly consistent with previous years. Most were technical breaches, and none resulted in any environmental impact.

In a year of good performance, Sellafield reacted well to the discovery of flammable chemicals in a building on the site. Disposal required the attendance of Army EOD, who transported the chemicals to a remote area of the site and destroyed them with explosives. The destruction left no harmful residues, and did not damage the local environment.

- Although Sellafield reacted well to the discovery of flammable chemicals in a building on the site (noted above) there were issues with the control of chemicals and the consignment of wastes, for which they received a Warning Letter from the Environment Agency.
- At the end of 2016, the SEPA rated Dounreay 'at risk' for the management of radioactive waste, and 'poor' for the low level waste vaults. In 2017, SEPA gave an overall rating of 'poor'. DSRL is making considerable efforts to rectify historical environmental issues and is making environmental compliance a priority. There are early signs of improvement, but the coming year will still be challenging as DSRL deals with its environmental legacies. We will monitor progress.
- During the year, Magnox received Warning Letters (a form of regulatory sanction) from environmental regulators for the misconsignment of waste to LLWR, and a number of radiological clearance events. Improvements were made, and Magnox ended the year with sustained good performance.
- Elsewhere, we were pleased to note good environmental performance at LLWR, which had no non compliances this year, and in our businesses, NDAPL, INS/PNTL, RWM and DRS.

### Safety and Environmental Performance in NDA Corporate Centre

NDA's in-house safety performance continued to be good, with no serious accidents or injuries during the year.

See Something, Say Something, the NDA's event reporting process, introduced in 2015, has continued to provide us with useful information and we use the analysis to report to our safety representatives every quarter.

This year, we ran successful campaigns in personal well-being, workplace stress and office safety. Included in these campaigns have been talks to promote mental health and welfare in the workplace.

The Government has set environmental and sustainability targets that must be met by 2019/20.

The specific targets set by BEIS in 2009/10 are:













- 32% reduction in greenhouse gas emissions from energy and business travel
- 10% reduction in waste to landfill
- 25% reduction in waste generation
- continue to reduce water usage with 10% reduction
- reduce domestic air travel by 30%
- reduce paper use by 50%.

The targets apply to the NDA Corporate Centre combined with Radioactive Waste Management (RWM).

At the time the targets were first set, RWM was part of NDA and managed by NDA Facilities Management. In 2014 RWM became a subsidiary of NDA and in 2016 took full ownership of its facilities management. However, it is still mandated for inclusion in the overall NDA report.

With the exception of water use, we expect to meet all the targets set. Further measures are being implemented for 2018/19 to try to reduce the water usage. An overview of progress against each of the targets is shown opposite.



TARGET 2019/20	PERFORMANCE 2017/18
 Reduce greenhouse gas emissions by <b>32%</b>	 Reduced by <b>45%</b>
 Reduce domestic flights by <b>30%</b>	 Reduced by <b>71%</b>
 Reduce waste generation by <b>25%</b>	 Reduced by <b>35%</b>
 Reduce landfill disposal to less than <b>10%</b>	 <b>Zero waste to landfill</b>
 Reduce paper use by <b>50%</b>	 Reduced by <b>70%</b>
 Reduce water use by <b>10%</b>	 Reduced by <b>9%</b>



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# Accountability Report

# Directors' Report

The NDA is an Executive Non-Departmental Public Body (NDPB), established by the Energy Act (2004) to oversee and monitor 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.

Rob Holden declared a commercial interest. He will be excluded from any involvement with Moorside deliberations because of his role at EDF.

All other directors have no personal, private or commercial interests which would conflict with his or her role as a director of the NDA.

Directors comprise senior management and non-executives whose details are set out in the Governance Statement on pages 39 to 51.

## 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.

## 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 those terms.

During the year, the NDA has achieved a 91.60% success rate for payment of suppliers in accordance with terms (2016/17 – 92.84%). The average number of payment days from invoice date was 30 days and for a valid invoice, (i.e. one with all details correct and entered on the accounting system), 12 days (2016/17 - 29 days and 12 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 8.42 days (2016/17 – 18.40 days).

## Personal data

There were no data breaches or loss of personal data for 2017/18.

## Other disclosures

Some disclosures 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 Our People Report on pages 52 to 62. 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 34.

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

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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 its income and expenditure, changes in taxpayers' equity and cash flows for the financial year.

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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, 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). UK Government Investments (UKGI) advises BEIS on corporate governance issues relating to the NDA, and act as BEIS's agent in managing the NDA Shareholder Function. 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 provides a summary of the structure of the NDA Board and the Executive and the effective governance over the key activities undertaken during 2017/18. 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.

		Meeting	Frequency	Purpose of meeting	Meeting Chair
<b>Chairman</b>  Accountable for the delivery of obligations under Energy Act 2004 and provides effective leadership and direction of the Board	NDA Board and Sub-Committees	NDA Board	Monthly 10 / Year	To set strategic framework and direction. Ensure corporate governance is observed. Responsible for key decisions. Monitor and challenge Group performance.	Board Chair
		Safety and Security Committee	Quarterly	To provide support to Board on discharging responsibility across NDA estate relating to Health, Safety and Security matters.	Non-Executive Director
		Audit and Risk Assurance Committee	5 / Year	To provide advice to Board on risk, control and governance. Assessment on assurance reliability and integrity.	Non-Executive Director
		Remuneration Committee	Quarterly	To provide advice to Board on remuneration, monitors performance, assesses succession planning and talent management.	Non-Executive Director
		Programmes and Projects Committee	5 / Year	To provide advice to Board on sanction, performance and assurance of programmes and projects.	Non-Executive Director
<b>Accounting Officer (AO) and CEO</b>  Responsible for leadership and operational management of the NDA. Accountable to Parliament for NDA activities, public funds employed and ensuring targets are met.	Executive Committee and Sub-Committee	Executive Committee	Monthly	Accountable for implementing strategy and plans approved by Board. Includes sanction review and decision making.	Chief Executive Officer
		Risk and Assurance Committee	Monthly	To monitor and manage risk and assurance mechanisms. To provide advice to Board Audit and Risk Assurance Committee.	Chief Financial Officer
		People Committee	Monthly	To manage the performance management and development of NDA employees.	Human Resources Director
		Sanction Committee	Monthly	To review and approve work activities across the NDA estate, including: programmes, projects, procurements, IT expenditure, contracts, asset disposal and investment opportunities. Subject to delegated authority, further approval by the NDA Board and Government may be required.	Assurance Director
		Projects and Programmes Committee	Monthly	To provide oversight of the Corporate Centre led projects, programmes and change initiatives – managing, monitoring and reviewing performance at a portfolio level.	Assurance Director

As at 31 March 2018, we had 9 members of the NDA Board - 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 2017/18 are summarised below:

NDA Board - Number of meetings held and attended								
Name	Role		Term of office ends	Board (10)	A&RAC (5)	REMCO (4)	S&SC (4)	P&PC (5)
Tom Smith	Chairman	N/A	28 Feb 2020	10	0	0	0	5
Janet Ashdown	Senior Non Executive Director	Chair of S&SC	30 Nov 2018	9	5	0	4	0
Volker Beckers	Non Executive Director	Chair of A&RAC	30 Sept 2018	8.5	5	0	0	0
Evelyn Dickey	Non Executive Director	Chair of REMCO	30 Sept 2018	10	0	4	0	0
Rob Holden	Non Executive Director	Chair of P&PC	30 Nov 2018	9	0	4	4	5
Candida Morley	Non Executive Director	N/A	6 Nov 2020	7	0	0	0	0
David Peattie	CEO and AO	N/A	N/A	10	5	4	4	5
David Batters	CFO	N/A	N/A	10	5	0	3	0
Adrian Simper	Director of Strategy and Technology	N/A	N/A	10	0	0	0	0

 Member  In attendance

## 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, where he led the development and construction of the M6 Toll, 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

**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

Chair - Submarine Delivery Agency

Other positions - Non-Executive Director of Nuclear New Build (NNB) Generation Sizewell C (SZC).

**Volker Beckers – Non-Executive Director**

Volker was Group Chief Executive Officer of RWE Npower plc until the end of 2012 and prior to this, its Group Chief Financial Officer 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).

**Current external appointments include:**

Board Member of Directors and Vice-Chairman - Danske Commodities A/S

Chair - UK PwC Advisory Board

Honorary VP and Advisory Board - Energy and Utility Forum Advisory Board - Kings College

Director and Honorary VP - British Institute of Energy Economics

Non-Executive Director - Elexon Ltd.

Other positions - Advisor to Executive - Mercatus Inc CA, USA

Non-Executive Chairman - Foresight Metering Ltd,

Cornwall Insight Ltd.

Trustee - Forum for the Future; German Heart Foundation, DHB Trust.

**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; Victrex plc.

Other positions: Chair RemCom SIG plc; Marshall's plc;

Victrex plc.



### **Evelyn Dickey – Non-Executive Director**



Evelyn has extensive human resources 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, retiring as Director of HR in 2017.

#### **Current external appointments include:**

Director - HR Function, Severn Trent (to 31 August 2017).

### **Candida Morley – Non-Executive Director**



Candida joined UKGI as a Director in October 2017 from HgCapital where she was an Operating Partner. Between 2001 and 2015 she worked at private equity fund LDC where her roles included Chief Portfolio Officer and Chief Operating Officer, prior to which she worked at Elementis plc, 3i plc and as Director of Development at the Victoria and Albert Museum.

Candida joined the NDA Board as Non-Executive in November 2017.

#### **Current external appointments include:**

Director - UK Government Investments.

### **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, having regard to the need for defensibility in public sector pay under advice and guidance from 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.

Throughout 2017, progress was maintained on the findings from the 2016 review in the following areas:

- a Strategy Review day was held in October 2017. This followed a similar exercise in October 2016 and is in response to the Board review 2016 recommendation that there should be increased Board engagement in setting and reviewing strategy on a regular basis
- performance reporting has undergone a full review throughout 2017 and the Board now receives, on a quarterly basis, a comprehensive and detailed performance report and shorter performance report inbetween. This aligns with the Executive Quarterly Performance Review undertaken with each of the businesses. Work will continue into 2018/19 to align the Board meetings with the quarterly calendar to provide a more focused discussion on contemporary issues and the actions that management are taking to address these.

In January 2018, the Board procured an external organisation to undertake a comprehensive Board annual effectiveness review. This has been successfully completed. An action plan has been produced, covering areas such as Board administration and support, the skills and composition of the Board, frequency of Board and Committee meetings, greater oversight of strategy and interactions and relationships with government. Progress of individual actions will be reviewed at Board meetings over the course of the current year and will be reported in next year's Annual Report.

Governance Statement (continued)

**Board Committees**

The Board is supported by its committees as outlined below:



**Audit & Risk Assurance Committee (A&RAC)**

The Audit and Risk Assurance Committee consists of 2 full members:

- **Volker Beckers (Chair)**
- **Janet Ashdown**

The following persons may attend meetings of the Audit and Risk Assurance Committee:

- Julian Kelly – Standing Advisor (from March 2018)
- Chief Executive / Accounting Officer
- Chief Financial Officer

- Assurance Director
- Head of Group Internal Audit
- Chief Compliance Officer
- Head of Financial Operations
- External Audit Representation (NAO)
- Representative from Government Internal Audit Agency (GIAA)
- NDA Chairman

**Number of meetings in the year: 5**

The NDA Board established an Audit and Risk Assurance Committee for the continuous monitoring of the effectiveness of the financial and risk assurance control frameworks established by the Executives of the NDA.

The Audit and Risk Assurance Committee advises the Board on:

- the strategic processes for risk management, information risk management, control and governance within the core NDA, and across the wider NDA Group
- assurances relating to the management of risk and corporate governance requirements for the NDA as an organisation
- anti-fraud policies, whistle-blowing processes, and arrangements for special investigations
- proposals for tendering for either Internal or and External Audit services or for purchase of non-audit services from contractors who provide audit services
- the accounting policies, the Annual Report and Accounts, matters arising from the external audit, and management's Letter of Representation to the external auditors

- the plans, activities and performance of Internal and External Audit
- the adequacy of management response to issues identified by audit activity, including the External Auditor's Management Letter.

During the year, the Audit and Risk Assurance Committee 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 Remuneration Committee's membership consists of 2 full members:

- **Evelyn Dickey (Chair)**
- **Rob Holden**

The following persons may attend meetings of the Remuneration Committee:

- Chief Executive / Accounting Officer
- HR Director

except for discussion in relation to their own remuneration.

- NDA Chairman

**Number of meetings in the year: 4**

More details on Remuneration Committee are contained in the Remuneration and Our People report on page 52.



### Safety and Security Committee (S&SC)

The Safety and Security Committee membership consists of 2 full members:

- Janet Ashdown (Chair)
- Evelyn Dickey

The following persons may attend meetings of the Safety and Security Committee:

- Perr Lindell – Standing Advisor (from March 2018)

- Chief Executive / Accounting Officer
- Assurance Director
- Director of SSSE (until September 2017)
- Head of Health, Safety and Environment (from September 2017)
- Security, Information and Services Director
- Regulators (attend once per year)
- NDA Chairman

Number of meetings in the year: 4

The NDA Board has established the Safety and Security Committee to support it in discharging its responsibilities in respect of issues of Health, Safety (including both nuclear and occupational safety), Environment, Nuclear Safeguards and Security in the NDA Group.

The primary responsibility for the majority of these issues within the NDA Group lies with the businesses and duty holders. In particular the SLC's have unambiguous responsibility for safety on their sites. However, the NDA has a duty of care over the operation of its whole group and in particular must ensure that the businesses discharge their responsibilities properly.

The Safety and Security Committee advises the Board on:

- issues of HSSSE in the NDA Group (current and projected)
- detailed summaries of safety, security and other information which are supplied to the Board
- appropriate Board response to issues of HSSSE within the NDA Group
- what further external or internal advice the Board should seek in relation to specific issues of HSSSE that may arise.

The Committee's routine business this year has been to scrutinise the management of HSSSE risks and performance across the NDA Group. Performance is benchmarked against relevant industry sectors, including high hazard, manufacturing, and energy, oil and gas. From time to time, and as considered necessary, the Committee will receive reports from Group businesses on events and accidents. For example, Sellafield Ltd and Dounreay Site Restoration Ltd were invited into Committee during the year to report on the actions taken to improve performance.

The Committee also receives and commissions independent reports from NDA's in house HSE and Security and Resilience teams, including trend analysis and reports of work undertaken by NDA to promote high standards and encourage collaboration. The output of the recently completed NDA Safety Climate Survey, is one such example.



### Programmes and Projects Committee

The Programmes and Projects Committee membership consists of 2 full members:

- Rob Holden (Chair)
- Tom Smith

The following persons may attend meetings of the Programmes and Projects Committee:

- To be appointed – Standing Advisor

- Chief Executive / Accounting Officer
- Assurance Director
- Sellafield Programme Director
- Director of Nuclear Operations
- Head of Portfolio Management

Number of meetings in the year: 5

The Board established a Programmes and Projects Committee to provide additional oversight and scrutiny of Major Programmes and Projects within the NDA Group. Including but not limited to programmes and projects relating to engineering, procurement and construction, information, technology, telecommunications, security and real estate development.

The Committee supplements Board oversight; it is not intended to supplant it.

The Programmes and Projects Committee will report and advise the Board on:

- progress of Major Programme and Projects against approved business cases and funding
- assurance that emerging issues concerning Major Programmes and Projects are understood and that mitigations are being appropriately pursued

- outcomes of assurance reviews (internal or external) and progress against actions plans to address any issues raised in these reviews
- the forward plan of programmes and projects/business cases coming to the Board for approval.

During the year, the Programmes and Projects Committee has provided oversight to and advised the Board on a number of major Programme and Projects business cases, oversight of the enhanced assurance arrangements, oversight of completed assurance in support of impending board decisions and forward assurance in support of later board decisions.



## Governance Statement (continued)

**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** - London Power Corporation plc. and Pacific Nuclear Transport Ltd (PNTL).



**David Batters**  
Chief Financial Officer

*Executive Board Director*

*CFO and Programme Director until 4 April 2018*

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 and Acquisitions, Planning and 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 and Internal Audit. For the year to March 2018 he was the Executive responsible for Dounreay Site Restoration Ltd, LLW Repository Ltd and Magnox with respect to performance and contract management.



**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,

**Other positions** - Trustee of St Bees School and Hon. Vice President of Wasdale Mountain Rescue Team.



**Alan Cumming**  
Director of Nuclear Operations

*Non-Board Director*

*Appointed 4 April 2018*

Alan Cumming joined the NDA as Director of Nuclear Operations in April 2018. He has responsibility for all operations, including health and safety.

A Chartered Civil Engineer and a Chartered Structural Engineer, Alan completed his nuclear training at Massachusetts Institute of Technology in Boston and has an MBA from Strathclyde Business School in Glasgow.

Before joining the NDA, Alan was Capital Projects and Engineering Director for Viridor, part of Pennon, Deputy Project Director for EDF Energy's New Build Nuclear Programme and Director of Projects for British Energy.

His early career was spent in the petrochemical industry with Foster Wheeler Energy, Brown & Root and Kvaerner, delivering projects in China, Indonesia, South Africa, Norway and the UK. He also provides support and advice to the University Of Sheffield's Advanced Manufacturing and Research Centre (AMRC), which incorporates nuclear.

**Current additional appointments include:**

**Non-Executive Director** - Sellafield Ltd and Highways England and Independent Project Consultants Ltd.



**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.



**Neil Hewlett**  
General Counsel and  
Company Secretary

*Non-Board Director*

Neil joined the NDA in September 2017. He is a qualified solicitor and experienced corporate and commercial in-house lawyer having worked in either global or pan-European legal roles for a number of multi-nationals based in the UK, the Netherlands and Belgium in the diversified industrial, logistics and chemical sectors.



**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.

**Current additional appointments include:**

**Non-Executive Director** - Sellafield Ltd



**Rob Higgins**  
Security and Information Services  
Director

*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, Private Finance Initiative (PFI) and Public Private Partnerships (PPP).

**Current additional appointments include:**

**Member of Westlakes Academy Trust.**

## Governance Statement (continued)



**Paul Vallance**  
**Director of Communications and  
 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 (resigned April 2018).



**Kate Ellis**  
**Commercial Director**

*Non-Board Director*

Kate Ellis brings a wealth of valuable commercial knowledge and experience to the NDA. Kate joined the NDA in November 2017 from the Ministry of Justice, where she was Commercial Director for Her Majesty's Prison and Probation Service.

Previously, Kate was with BP for 22 years. She held several senior roles with the organisation, including Commercial Director of BP Shipping.



**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 Alstom. Roles have included HR Director for the TATA Steelmaking Operations in South Wales and HR Director for Shipbuilding and Support business across Glasgow and Portsmouth within BAE systems.

## Executive Committee (ExCo)

The Executive Committee meeting agenda has been re-aligned to match the Committees of the Board. Each month the ExCo meets and over a two-day period covers the agenda as follows: Sanction Committee, People Committee, Risk and Assurance Committee and Programme and Projects Committee. Other areas covered by the ExCo include Performance Monitoring, Planning, Contracting and Strategy.

### Financial Control

The NDA has strong financial controls to ensure it remained within its budgetary spend for 2017/18 of £3.3 billion. It has well-defined delegated authority and a clear budgetary framework. The system remains effective with no issues identified by Internal or External Audit during the year. Programmes and projects control across the Group is exercised by the executive through the ExCo Sanctions and Programmes and Projects Committee.

### Risk Management

Managing risk is a fundamental NDA responsibility. By following international good practice in risk management the NDA aims to:

- improve business performance and efficiency
- safeguard the NDA's staff, contractors, assets, environment and reputation
- promote good governance by integrating risk management and internal control
- foster a risk aware culture that ensures decision-making reflects the NDA's appetite for risk
- provide 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.

A large number of our risks require action from our businesses. However, accountability for their impacts often remains with the NDA. We therefore spend substantial effort on seeking assurance over the way risks are being managed on our behalf.

### Risks Identification and Reporting

The key risks to the business are classed as corporate strategic risks. Each of these is supported by a fully documented risk assessment and Executive level sponsor. At the beginning of 2017/18 there were 14 corporate strategic risks with one of these being downgraded and four added during the course of the year to reflect emerging issues and the business environment in which the NDA operates.

An assessment of Brexit impacts has also been delivered focusing on scenarios impacting upon regulatory regimes, safeguarding arrangements and access to materials, skills and research critical to nuclear operations. This assessment has allowed us to begin preparing for a range of potential Brexit scenarios.

This year we have also improved performance management arrangements over our businesses through a refreshed and more focused Quarterly Performance Review (QPR) process. Adjustments to the reporting of significant threats and opportunities have been made to make them more prominent and therefore, subject to a greater Executive scrutiny.

Workshops with the Executive and the Board were used to review all risks, with 5 of these (highlighted) being subject to more detailed scrutiny by the Board during the course of 2017/18.

Risk	Key NDA Risk Controls	Risk Owner Function
1. Significant scope change	<ul style="list-style-type: none"> <li>• Critical Stakeholder Engagement Framework</li> </ul>	STRATEGY AND TECHNOLOGY
2. Technical solutions fail to achieve desired outcomes	<ul style="list-style-type: none"> <li>• Research and Development Strategy</li> <li>• Technical Baseline and underpinning Research and Development process</li> <li>• NDA requirements defined within client specifications</li> </ul>	STRATEGY AND TECHNOLOGY
3. NDA has insufficient funding to fulfil its mission for the next 5 years	<ul style="list-style-type: none"> <li>• NDA contract model including Lifetime Plans and Annual Site Funding Limit</li> <li>• Business Planning Process and Portfolio Management</li> </ul>	FINANCE
4. NDA assets do not perform as required adversely impacting on NDA mission	<ul style="list-style-type: none"> <li>• NDA requirements defined within client specifications</li> <li>• NDA Asset Management Assurance Plan</li> <li>• Asset Management Incentivisation</li> <li>• Business Continuity Capability</li> </ul>	NUCLEAR OPERATIONS
5. Poor management of the supply chain results in inadequate performance and reduced value for money	<ul style="list-style-type: none"> <li>• Supply Chain and Procurement Strategy</li> <li>• Supply Chain monitoring</li> </ul>	COMMERCIAL
6. Insufficient capability and capacity to deliver the NDA mission	<ul style="list-style-type: none"> <li>• HR Management Information</li> <li>• Resource Planning</li> </ul>	HUMAN RESOURCES
7. Failure of SLC related contracts, programmes and projects to deliver strategic outcomes	<ul style="list-style-type: none"> <li>• Benefit Realisation Plans</li> <li>• NDA Contract Mechanisms</li> </ul>	NUCLEAR OPERATIONS



## Governance Statement (continued)

Risk	Key NDA Risk Controls	Risk Owner Function
8. Major safety or security incident disrupting the NDA's mission	<ul style="list-style-type: none"> <li>Executive and Board level Leadership</li> <li>Resilience Programme – Emergency Plans, Business Continuity Capability</li> </ul>	NUCLEAR OPERATIONS / SECURITY INFORMATION SERVICES
9. Failure to deliver the benefits of the Sellafield subsidiary	<ul style="list-style-type: none"> <li>Annual setting of SL targets</li> <li>Stakeholder Engagement Framework</li> <li>NDA Executive on the SL Board</li> </ul>	NUCLEAR OPERATIONS
10. Failure of control environment leads to fraud, bribery and corruption	<ul style="list-style-type: none"> <li>Fraud, bribery and corruption related policies</li> <li>Internal Audit Programme</li> </ul>	FINANCE
11. Ineffective NDA lifecycle governance of subsidiaries and affiliates (excluding Sellafield)	<ul style="list-style-type: none"> <li>Subsidiary Internal Audit Programme</li> <li>Planning, strategy and performance framework</li> </ul>	FINANCE
12. NDA Estate unable to deal with the effect of a cyber attack	<ul style="list-style-type: none"> <li>Cyber, security and resilience programme</li> </ul>	SECURITY INFORMATION SERVICES
13. Loss of stakeholder confidence in the NDA's ability to safely lead the mission and demonstrate value for money	<ul style="list-style-type: none"> <li>Stakeholder Engagement Framework</li> </ul>	COMMUNICATIONS
<b>New Risks</b>		
14. Threat to the timescale for delivery of the GDF caused by delays to the siting process and inability to transition to a new organization leading to risk to the NDA mission	<ul style="list-style-type: none"> <li>GDF siting process</li> <li>RWM transformation plan</li> </ul>	NUCLEAR OPERATIONS
15. Unsuccessful transition of the Magnox SLC from a PBO to a new ownership model	<ul style="list-style-type: none"> <li>NDA Magnox Transition team and project</li> <li>Transition Governance</li> </ul>	NUCLEAR OPERATIONS
16. Failure to deliver and or sustain organisational improvements to the NDA undermining our ability to demonstrate value for money	<ul style="list-style-type: none"> <li>Way Ahead activities</li> </ul>	CEO
17. Brexit related policy changes and disruption to business operations threaten the NDA mission	<ul style="list-style-type: none"> <li>Engaging in EURATOM exit policy response</li> <li>Brexit business impact assessments</li> <li>Dual-use procurement planning</li> </ul>	STRATEGY AND TECHNOLOGY / LEGAL

## Information Governance

The Senior Information Risk Owner (SIRO), Rob Higgins (Security, Information and Services Director), has responsibility for all aspects of Information Governance (IG), Information and Communications Technology (ICT) and Cyber Strategies together with their underpinning programmes across the NDA Group. This includes:

- Cyber Security
- Physical Security and Resilience Planning
- Knowledge and Information Management
- Information and Communications Technology
- Management of Intellectual Property
- Information Risk Management and Assurance.

This year has seen the formation and development of the Office for the NDA SIRO (ONDAS). This team will provide effective management of information risks and issues across the nuclear estate through ensuring compliance to the NDA Risk Appetite. On behalf of the NDA SIRO, it will support a proactive risk governance regime. This will drive efficiencies while reducing information losses through the education of Senior Information Risk Owners and Information Asset Owners across the Group estate, thereby fostering a mature understanding of how to balance risk against cost.

During the year a large number of physical records collections have been relocated to Nucleus, the Nuclear and Caithness Archive. Nucleus opened to the public in February 2017 and since then a 'sift and lift' programme has been in operation across the NDA Group to relocate significant records collections to the facility. This satisfies a number of requirements for the NDA, not least, ensuring our ability to secure and records-manage these collections making the information assets available in the longer-term. It ensures a huge risk reduction as many of these records are sensitive, whether they are classed as personal information or classified nuclear records.

Within NDA Corporate Centre, emphasis this year has been on the identification of 'at risk' knowledge and know-how. Accordingly, NDA has developed a Knowledge Health Check programme designed to identify those areas of the business where the loss of such knowledge assets would have a detrimental effect on NDA achieving its overall mission. To compliment this we have also developed the ROCK programme (Retention of Critical Knowledge) a process by which staff and their managers complete an assessment of individual skills and knowledge and instigate activities designed to capture and record this knowledge such that it can be shared and re-used by others.

Additionally, NDA Corporate Centre has put in place measures and plans to respond to the impact of the General Data Protection Regulations which came into force in May 2018. The

SIRO's assessment is that NDA is making good progress with a mature plan in place in order to ensure compliance with new legislation. Progress will be reported to the NDA Board on a regular basis.

The cross-Group SIRO forum, comprising of senior NDA and Directors from our businesses responsible for Information Governance, meet regularly to provide governance over the Group assurance programme and audit performance reviews in these areas.

In summary, Information Risk Management performance continues to improve across the Group and this is, in part, down to the successes of the Information Governance and Cyber programmes. However, the threats continue to escalate and, as such, assurance activities and reviews will continue for the foreseeable future.

## Modern Slavery Act 2015

The Modern Slavery Act 2015 requires organisations with a global turnover above £36 million to publish an annual slavery and human trafficking statement disclosing what steps are being taken to ensure modern slavery is not taking place in any of its business or supply chains.

Our activities to combat slavery and trafficking are risk based and correspond to the level of risk identified. We know our biggest risk is within our indirect, Group-wide supply chain. We expect our suppliers to adhere to the same high standards as NDA.

We have inserted clauses into NDA standard terms and conditions requiring suppliers to comply with the anti-slavery legislation and we expect our group companies and supply chain to do the same and have added wording to NDA tender documents to draw attention to NDA's zero tolerance stance to slavery issues. Existing tender documentation includes the mandatory exclusion of any bidder who has been convicted of an offence under the Modern Slavery Act 2015.

Around 700 organisations are signed up to our Supply Chain Charter and the revisions regarding compliance with the Modern Slavery Act 2015 are being highlighted to each supplier.

In compliance with the legislation, NDA produces and publishes an annual statement, approved by the Board, which sets out NDA's position on modern slavery, its understanding of the risks and implications, and the steps that it is taking to mitigate the risks and ensure that slavery and human trafficking do not exist within NDA or within its supply chains.

As of March 2018 no instance of slavery or human trafficking has been identified.

## Governance Statement (continued)

### Effectiveness of the Control Environment

As Accounting Officer, I have responsibility for ensuring the System of Internal Control and its effectiveness are both sound. I am also personally accountable for safeguarding the public funds allocated to the NDA, as well as departmental assets, in line with the HM Treasury publication 'Managing Public Money'. Support for these activities is provided by the NDA Internal Audit function, the External Auditors (the National Audit Office) and other assurance functions, both within the NDA and across the Group.

In accordance with Treasury guidance, the NDA System of Internal Control has been in place for the period commencing 1 April 2017 up to the approval date for the Annual Report and Accounts. The system is designed to manage risk to a reasonable level while complying with relevant rules and regulations.

It is impossible to eliminate all risk of failure in implementing policies, aims and objectives; therefore the system provides assurance of effectiveness to a level that is reasonable rather than absolute. My executive team members are responsible for developing and maintaining the Internal Control Framework in their own functional areas. Oversight and challenge to the System is provided by the Board and also by the Audit and Risk Assurance Committee, who ensure plans are in place to address any weaknesses.

In addition to the NDA's controls, significant reliance is also placed on those controls operated by businesses across the Group. In line with government requirements, the NDA Modelling and Analysis Team tests the robustness of the end-to-end process used in developing all the Group's business-critical models and spreadsheets, which influence the NDA's key business decisions.

In line with standard ratings of the Government Internal Audit Agency, the NDA's Head of Group Internal Audit has provided a rating of 'moderate' to the 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 concluded that there is generally a high level of compliance with the Government Code of Corporate Governance. This view is based on the work of Internal Audit, including oversight of the various assurance activities undertaken by the NDA, its subsidiaries and through engagement with the Internal Audit functions of the businesses.

The NDA Internal Audit work for 2017/18 was designed to provide assurance against key business processes, along with specific corporate risks. The audit plan covers both the NDA and its subsidiary businesses with the exception of Sellafield, which operates its own stand-alone Internal Audit function. The NDA Internal Audit work plan was expanded significantly during the year in response to emerging risks.

The findings from the Internal Audit reports across the Group receive close attention from both the Executive team and the Board via the Audit and Risk Assurance Committee.

Reports rated as either 'giving no assurance'; 'limited level of assurance' or 'moderate levels of assurance' were assigned to 30% of the NDA-led Internal Audit reviews completed by the year end.

Predominant among these was the review of the 'Magnox Competition Baseline - Internal Governance and Consolidation Process', a review that started in 2016/17 at the request of the Board. This resulted in several areas of concern reported for Executive and Board consideration at an interim stage, which are now confirmed at the final stage. The findings from this report are also covered by the work of the NAO and the Magnox Inquiry team and a wide range of actions have been agreed and are progressing to address these. Other topics within this group include: the NDA Corporate Centre Role within Site Wide Procurement, Business Continuity and Emergency Response and DSRL Contract Management Arrangements.

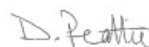
The improvements recommended in these 4 reports have a common theme in that they relate to the NDA needing to be more focused on giving clear strategic direction on specific activities to its businesses and to strengthen arrangements for monitoring and controlling activities across the Group.

By contrast, 70% of the work undertaken by Internal Audit resulted in reports being rated as giving either 'high' or 'substantial' levels of assurance. The majority of this work covered a range of business operating processes, such as financial controls, internal procurement controls and HR controls, both at the Corporate Centre and the businesses.

During the year, I have made 3 new senior appointments (Commercial Director, General Counsel and Director of Nuclear Operations) to strengthen the running and governance of the organisation. Separately I have appointed a Chief Compliance Officer whose role is to further enhance the internal control environment.

The NAO has also recently reported on progress towards reducing risk at Sellafield. The recommendations of this report will inform and support our ongoing work to optimise the governance and assurance systems in the NDA.

On balance, as Accounting Officer, I am therefore confident that the system of internal control operating throughout the past year is reasonably effective, and appropriate to meet the NDA's objectives. In reaching this conclusion, I have taken advice from the Head of NDA Group Internal Audit. I have also been mindful of the outcome of work by several important bodies examining the Magnox procurement, namely the NAO, the Parliamentary Public Accounts Committee and the Magnox Inquiry.



**David Peattie**  
Accounting Officer and Chief Executive Officer  
26 June 2018

# Remuneration and Our People Report

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.

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## The Board and Directors

During 2017/18, there was one change at Board level with the appointment of Candida Morley in November 2017.

### The role of Chairman

Tom Smith was appointed Chairman on 1 March 2017 for a period of 3 years. Tom had served on the Board as a non-executive director from 5 March 2013.

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.

### The Board

The table on page 40 summarises Board membership and current terms.

Public servant 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.

The following non-executive directors received 6 month contract extensions; Volker Beckers, Janet Ashdown, Rob Holden and Evelyn Dickey.

One Board member has declared a conflict of interest for the 2017/18 financial year, see page 37, Directors' Report.

## Remuneration Committee

The Remuneration Committee will report and advise the Board on:

- the remuneration and terms of service of the Chief Executive and Executive Directors to ensure they are fairly rewarded for their individual contribution to the organisation, having proper regard to 1) the Authority's circumstances and performance; 2) pay and employment conditions across the Authority including the gender pay gap; and 3) the provisions of any national arrangements for such staff where appropriate
- the performance of the Chief Executive and individual Executive Directors through the mechanism of annual objectives agreed between the Chairman and Chief Executive, and the Chief Executive and each of the executive directors
- appropriate contractual arrangements for such staff including the proper calculation and scrutiny of termination payments taking account of such national guidance as is appropriate
- the NDA's employment policies and their revision, including matters of magnitude in relation to HR issues such as talent management and executive succession planning.

The main activities covered by REMCO in 2017/18 were:

- a review of performance at a NDA level and individual executive level to determine the annual bonus awards for the year 2016/17
- agreement of the vesting of the Long-Term Incentive Plan (LTIP) awards granted in 2014
- agreement of the awards for the LTIP plan to vest in 2020
- a review of executive remuneration, benchmarking and the future methodology of incentive schemes
- a review and consultation with government departments on pension flexibility in the form of an allowance for higher earners within the NDA.





## Remuneration Committee (REMCO)

The Remuneration Committee's membership consists of 2 full members:

- **Evelyn Dickey (Chair)**
- **Rob Holden**

The following persons may attend meetings of the Remuneration Committee:

- Chief Executive / Accounting Officer
  - HR Director
- except for discussion in relation to their own remuneration

- NDA Chairman

Number of meetings in the year: 4

## Remuneration policy

The procurement of global private sector expertise to deliver decommissioning requires highly professional executives 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, 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 6th consecutive year, set at 1%.

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 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.

### 2017/18

A report on achievement of the Corporate Targets was prepared by BEIS Internal Audit and reviewed by the Audit and Risk Assurance Committee. After considering this report, the Remuneration Committee made a recommendation to award an overall 80% achievement of the corporate element of bonus award, and this was subsequently endorsed by the Board.

The individual performance and contribution of each executive was also reviewed and percentage achievement figure confirmed.

In 2016/2017, against the context of the Magnox litigation and overall NDA performance, the Remuneration Committee set the corporate element of the performance related pay at nil for all staff. The committee also determined that the executive would not receive any performance related payment for the year.

### Long-term Incentive Plan (LTIP)

The aim is to motivate executives to improve performance and increase engagement in activities to deliver on longer-term outcomes. The NDA LTIP scheme is subject to the achievement of objectives which are long-term, strategically important, quantifiable and subject to the direct leadership of the NDA.

An LTIP Award is made at the start of each 3 year LTIP period and is subject to a multiplier of up to 2 at the end of the

term. This is dependent on performance against targets and improvements to the operating plan as determined by the Remuneration Committee.

A review of the scheme has taken place this year and changes will be implemented for the 2018-21 scheme. Progress against LTIP targets are reviewed regularly as part of the Remuneration Committee meetings.

A decision on payment of the LTIP scheme for 2015-18 has been deferred pending the outcome of the Magnox Inquiry. In 2016/17 the Remuneration Committee reduced the final payment of the 2014-17 LTIP by one third to reflect the outcome of Magnox litigation.

### 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. Membership of a defined contribution scheme is also available to employees through a Partnership Pension arrangement.

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 59 for further detail. Pension

benefits for executive directors are provided through the Civil Service Pension Arrangements.

Employees are automatically enrolled into Alpha 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.

### Other benefits

Benefits are listed in the Directors' Emoluments table with appropriate footnotes. All executive 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. Details of these fee supplements can be found in the table below.

Non-executive directors and the Chairman do not receive performance-related bonuses or pension entitlements and 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.

2017/18	Committee Chair	Fee per annum (£)	Effective Date
Evelyn Dickey (i)	Chair of Remuneration Committee	5,000	1 June 2017
Volker Beckers	Chair of Audit and Risk Assurance Committee	5,000	17 March 2016
Janet Ashdown	Chair of Safety and Security Committee	5,000	17 March 2016
Robert Holden	Chair of Programmes and Projects Committee	5,000	1 June 2017

(i) Fee of £7,500 (per annum) was paid during period 1 June 2015 - 31 May 2017.

### Ratio between median earnings of organisation's workforce and highest paid Director ('Hutton' Disclosure)

*This information has been audited*

	2017/18 Total £	2016/17 Total £
Band of highest paid Director's total remuneration	495,000 - 500,000	395,000 - 400,000
Median total remuneration	67,959	72,769
Ratio	7.3:1	5.4:1
Band of lowest paid employee's total remuneration	20,000 - 25,000	20,000 - 25,000

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. The change in ratio results from a combination of lower median pay (lower bonus payment) and an increase of highest paid director remuneration (bonus accrued in 2017/18; nil payment in 2016/17).

## Remuneration and Our People Report (continued)

**Our People 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 2017/18.

**Development and capability****National Skills**

The NDA needs a long-term skills plan to ensure the continued safe, secure and cost-effective lifecycle management of nuclear materials and spent fuels. The initial focus will need to be on spent fuel management as the nation changes its strategy from reprocessing to long term storage and disposal. There is also the legacy waste and plutonium to be processed at Sellafield. These waste management issues will need high level skills and dedicated research capability, together with talented project teams to deliver the ultimate solutions

The Nuclear Skills Strategy Group (NSSG) formed to represent all parts of the industry, working with government and trade unions, setting out the strategic skills priorities. The NDA is a core member of the NSSG and takes the lead role in representing decommissioning within the wider nuclear context. Nuclear activities in the UK today are diverse. Ranging from design to remediation, they support decommissioning, electricity generation, fuel storage and processing, research and development, design, construction, commissioning, operation and maintenance of nuclear submarine propulsion and weapon systems, and the regulation of all of these activities.

In March 2015 the government published the nuclear sector skills strategy 'Sustaining our Nuclear Skills', which outlined the following common goals for the industry:

- aspire to meet 90% of the sector's skill demands from the UK workforce by developing the right profile and pipeline of skills to meet the future demands of the sector.
- ensure the nuclear workforce's expertise is unsurpassed globally by developing training, development and certification programmes of the highest quality.
- cultivate a more diverse nuclear workforce, including by increasing the proportion of the sector's workforce who are women to 40% and the proportion of women in senior management to 25% by 2030.

These strategic priorities are supported by a number of programmes and projects in which the NDA are taking an integral role in leading, developing and implementing.

- build a nuclear legacy of competent people resources in decommissioning and areas of nuclear development suitable to meet the local needs into the foreseeable future

- ensure that the NDA group maximises the use of the apprenticeship levy for both new entrants and existing workforce.
- increase the number of apprentices across the sector to 2000 by 2020
- engage young people and enhance long-term career opportunities for STEM
- provide opportunities for continued professional development of the existing workforce, particularly people who are mid-career
- ensure a more flexible and mobile nuclear workforce
- facilitate and encourage cross-sector movement between civil and defence and by non-nuclear personnel
- facilitate highly skilled individuals in passing on their knowledge and mentoring the next generation, thus future proofing the sector's skills and competence base
- reduce costs to industry and to the tax payer associated with the need to train and re-train the workforce

NDA will continue to support Government and the broader Nuclear Industry in such a critical enabler for the Industry.

**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 a Leadership Development Programme was launched, where diagnostics were used to benchmark where we are against a broader leadership cohort and identifying strengths and gaps. The key aims were to:

- ensure we understand our leadership capability
- ensure we robustly challenge ourselves against external benchmarks in order to improve our leadership practice
- raise our leadership expectations
- develop the application of 'living our values' against our future needs
- invest 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 have adopted a balanced approach to learning and created a suite of leadership development solutions. 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. The Career and Progression Framework details the key skills and capabilities required at every level and within each of our 3 broad job families: Programme Related roles; Strategy and Technology roles; and Business Enabler roles. The framework underwent a post-implementation assurance review in 2016/17 and, during 2017/18, we have been implementing the recommendations from that review to ensure that it continues to drive the right skills and capability improvements for the NDA. Most notable of these was the pilot of Progressional Promotion panels which will be rolled out twice per year during 2018/19.

During the year, as part of our policy and process improvement plan, we developed a revised approach to talent which is now more employee driven, encouraging individual employees to take increased responsibility to manage and drive their career development. Our key processes 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 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.

Our performance management assessment measures assess a holistic performance rating which takes into account both what has been delivered and achieved and how.

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

**External Recognition - Investors In People (IiP) Silver Standard**

The above 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 held since 2016.

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 recent interim assessment in March 2018 gave confidence that the NDA retain the Silver statue with a further assessment against the full standard scheduled for March 2019 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.

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

There were 5 secondments outside of the NDA and 14 secondments made into the NDA. A total of 711 face-to-face training days were recorded.



## Remuneration and Our People Report (continued)

**Headcount and employee costs****NDA Group staff costs***This information has been audited*

NDA Group 2018	NDA Authority (a)		Subsidiaries (b)		Total
	Permanently employed staff	Others	Permanently employed staff	Others	
	£m	£m	£m	£m	
Wages and salaries	18	3	641	42	704
Social security costs	2	-	74	-	76
Pension costs	3	-	103	-	106
<b>Total staff costs</b>	<b>23</b>	<b>3</b>	<b>818</b>	<b>42</b>	<b>886</b>

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

(a) Authority staff costs are included within administration expenditure (see note 5 to the accounts)

(b) Subsidiary staff costs are reported through the 'contractor and subsidiary costs' line in the Financial Statements (see note 6 to 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 appearing within operating costs. Items reported elsewhere have been excluded.

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

*This information has been audited*

NDA Group	Permanently employed staff no.	Others no.	Total 2018 no.	Total 2017 no.
Directly employed - Authority	210	24	234	238
Directly employed - Subsidiaries	11,797	772	12,569	12,934
<b>Total</b>	<b>12,007</b>	<b>796</b>	<b>12,803</b>	<b>13,172</b>

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

Authority 2018	Male	Female	Total
Chief Executive	1	-	1
Exec Directors excl. CEO	2	-	2
Other Directors (non-Board)	5	2	7
Other employees	115	85	200
<b>Total</b>	<b>123</b>	<b>87</b>	<b>210</b>

### 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. In determining this information we utilize the IR35 checker provided by HMRC on gov.uk. 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.

Our off-payroll appointments at 31 March 2018 for those individuals on more than £220 per day and lasting more than 6 months (up until the expected end date – not 31 March 2018) are detailed below. There were 5 new off-payroll workers in the year whose assignments lasted more than 6 months (between start (after 1 April 2017) up to 31 March 2018 not end of contract):

Length of appointment at 31 March 2018	No. of off payroll contractors
Less than 1 year	11
1-2 years	5
2-3 years	0
3-4 years	3
More than 4 years	1

Consultancy spend in the year was £59,000 (2016/17: nil).

### 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 2017/18 an average of 5.3 days per employee was lost to sickness absence. This equates to an absence rate of 2% and is less than the national average of 6.3 days. An analysis of 2017/18 total absence identifies that mental health contributed to the majority of long-term absences.

Our focus for the coming year is to further promote mental health and wellbeing. We have started to look across the Group for support to help the NDA host a Group mental health and wellbeing event in 2018, where we will be able to share our experiences, and set out our plans for the future.

### Staff Turnover

The average length of service is 7.4 years and for the year 2017/18 turnover of permanent staff was 9.6%. This compares to an average external turnover rate of 16.5% (as per latest 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*

2018 Exit package cost band	Number of compulsory redundancies	Number of other agreed departures	Total no. of exit packages by cost band
£50,000 - £99,999	0	1	1
Total no of exit packages	0	1	1

In 2016/17, there was 1 such individual who left the NDA with an exit package as set out below.

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



**Respected. Included.  
Performing at our Best.**

### Equality, Diversity and Inclusion

Cleaning up the UK's earliest nuclear sites will require the brightest minds and best hands for decades to come. We need to make sure that we can attract and retain talent to meet current and future skills demands and ensure we remain attractive in the market. The evidence on respect and inclusion speaks for itself, as does the experience of businesses across the world.

Organisations that take Equality, Diversity and Inclusion (ED&I) seriously attract and retain the best people, perform better and ultimately are more successful. So treating everyone equally and with respect and creating an environment where differences of thought and perspectives are encouraged, isn't just the right thing to do, it's good for our mission.

We want to see a step change that puts our organisations and the nuclear decommissioning sector among the very best when it comes to inclusive employers.

In 2017 we developed our ED&I Council to drive progress in this area right across our estate and we started by asking our

## Remuneration and Our People Report (continued)

16,000 strong workforce how they feel about our culture.

In response to the results of that survey, which showed we have some way to go, we have developed an EDI Strategy, local action plans and stretching targets.

In addition, 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.

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 who are disabled, or have become recently disabled, in order to support their continuing employment, training, career development and promotion.

During the year, 20 permanent appointments (19.6 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.

### Gender Pay

New government policy requires organisations with over 250 people to publish their gender pay gaps. Despite NDA being below this threshold, being open and transparent in reporting our figures is extremely important to the NDA and a decision was made to publish the NDA figures along with those for all of our businesses, regardless of how many people they employ.

Across the whole of the NDA Group we have varying degrees of gender pay gaps that range from 12% for Dounreay to 40% within the NDA Corporate Centre. The gaps are due to a number of factors, including the uneven distribution of men and women across the pay grades, with a far greater proportion of men in the higher grades. The causes of this are broad and find some of their roots in the complex history of our industry. Within the NDA Corporate centre, the figures published were based upon 214 total NDA employees (91 female 123 male) with the overall gender pay gap for the NDA, when comparing mean pay, being 40.7%. and the median pay gap being 38.5%.

The Gender breakdown per quartile was:

Quartile	Female %	Male %
Lower quartile	84.9%	15.1%
Lower middle quartile	43.4%	56.6%
Upper middle quartile	15.1%	84.9%
Upper quartile	24.5%	75.5%

The key factors explaining the gender pay gap are:

### 1. Distribution of males and females across pay bands

There are 12 salary levels within the NDA and 66 females (73%) are in the lower half of pay bands compared to 31 men (25%). The reasons behind this are:

- under-representation of women in the Executive (8 men and 1 woman) at the reference date of 31 March 2017
- under-representation of women in other senior roles
- over-representation of women in junior roles

In addition, NDA Executive salaries are set to reflect leadership and governance of the whole civil nuclear group and are significant for an organisation of our size. This has a greater impact on the mean hourly rate and bonus calculations.

### 2. Distribution of bonuses across males and females

The under-representation of women in senior roles and over-representation in junior ones are also reflected in the gender bonus pay gap. The mean bonus gap of 50% and the median bonus gap 54.2%. Bonus levels are weighted against responsibility and therefore seniority within the NDA. The low distribution of females in the most senior roles has a significant impact on the bonus gap. In line with reporting requirements, our mean bonus gap is based on actual bonuses and does not take account of part-time working. When calculated on a full-time equivalent basis, our mean bonus gap is reduced to 41.7% and our median bonus gap to 43.4%.

The NDA is working hard to address issues around diversity and inclusion. It's not only a moral duty, but a business priority. Organisations that benefit from diversity in background and viewpoints attract and retain the best people and are ultimately more successful. Ensuring a more balanced distribution of males and females at all levels will be good for our business and is needed to address the gender pay gap. Change won't happen overnight, but we are taking steps to close this gap. This will see us:

- recruit people differently
- review our approach to reward and development
- promote flexible working practices
- take best practice from other industries
- re-examine our approach to attracting women into the industry

We will continue to focus on this key agenda and report annually on progress.

### 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.

This 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)	2017/18 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.

Employee membership of the schemes in the NDA is noted in the table below:

Scheme	% of employees
alpha	81
Nuvos/Premium/Classic	14
Partnership	3
Opt Out	2

A career average scheme, alpha, 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 and maintained membership of their current scheme.

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 2017/18 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 updated 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 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 single provider. 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](http://www.civilservicepensionscheme.org.uk)



## Remuneration and Our People Report (continued)

**Directors' emoluments**

This information is subject to and has been audited.

2017/18	Salaries £	Additional benefits £	Performance Related Payment £	LTIP payments made (xvi) £	Pension benefits (xiv) £	Total emoluments £
Tom Smith (ii)	150,000	-				150,000
Volker Beckers (iv)	30,202	-				30,202
Evelyn Dickey (v)	30,417	-				30,417
Janet Ashdown (vi)	30,202	-				30,202
Rob Holden (xii)	29,167	-				29,167
Candida Morley (xiii)	-	-				-
David Batters (viii)	231,818	12,000	71,863	-	88,902	404,583
Adrian Simper (x)	202,000	12,000	57,570	-	70,111	341,681
David Peattie (xi)	310,000	57,725	131,750	-	-	499,475

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

- (i) term completed 28 February 2017
- (ii) appointed Chairman 1 March 2017, salary £150,000 per annum; Remuneration for 2016/17 comprised £22,917 as Non-Executive Director for 11 months to 28 February 2017 and £12,500 as Chairman for the month of March 2017
- (iii) did 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. 2017/18 figure includes adjustment of £202 in respect of previous period
- (v) additional fees of £7,500 paid for the role of Chair of the Remuneration Committee in June 2017, subsequently approved by Government at £5,000; additional fee payable reduced 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. 2017/18 figure includes adjustment of £202 in respect of previous period
- (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 ended 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. Pension benefits in 2016/17 comprised £55,315 within PCSPS / alpha (calculated in accordance with note (xiv) and £19,052 employer contribution to the Partnership Scheme. 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, in 2016/17, compensation for unused annual leave of £4,397
- (ix) resigned 31 October 2016. Additional benefits received were a car allowance of £7,000 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
- (x) additional benefits received were a car allowance of £12,000
- (xi) appointed 1 March 2017 (salary £310,000 per annum). Additional benefits received were a car allowance of £12,000 per annum (2016/17: £1,000) and a pension allowance of £45,725 per annum (2016/17: £3,810) in lieu of participation in the Civil Service pension arrangements
- (xii) additional fees of £5,000 agreed for the Chair of the Programmes and Projects Committee with effect from 1 June 2017
- (xiii) appointed 7 November 2017. Did not receive any remuneration for her services to the Board
- (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
- (xv) performance related payments for 2016/17 were not awarded due to the Magnox settlement
- (xvi) award of LTIP payment for 2015-18 scheme has been deferred pending a decision by the Remuneration Committee following the Magnox Inquiry report.

### Executive Directors' Pensions

	Real Increase in Pension during the year 2017/18 £000's	Accrued Pension at 31 March 2018 £000's	CETV at 31 March 2017 £000's	CETV at 31 March 2018 £000's	Real Increase in CETV Funded by Employer £000's
David Batters	5 – 7.5	35 – 40	383	459	44
Adrian Simper	2.5 - 5	70 - 75	1,034	1,139	31
David Peattie*	-	-	-	-	-

Notes:

\* 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.

## Disclosures required under the Trade Union (Facility Time Publication Requirements) Regulations 2017

### Relevant union officials

Relevant union officials	Full-time equivalent employee number
6	210

### Percentage of time spent on facility time

Percentage of the working hours spent by relevant union officials, employed during the relevant period, on facility time.

Percentage of time	Number of employees
0%	1
1-50%	5
51-99%	-
100%	-

### Percentage of pay bill spent on facility time

Total cost of facility time	£20,607
Total pay bill	£19,129,452
Percentage of the total pay bill spent on facility time, calculated as: (total cost of facility time ÷ total pay bill) x 100	0.1%

### Paid trade union activities

Time spent on paid trade union activities as a percentage of total paid facility time hours calculated as (total hours spent on paid trade union activities by relevant union officials during the relevant period ÷ total paid facility time hours) x 100	0%
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# 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 £2,248,145 (2017: £98,879,264).

Type of loss	2018 Total £	2018 Number of cases	2017 Total £	2017 Number of cases
Cash losses	-	-	-	-
Store losses	1,943,662	100+	882,524	100+
Losses of pay, allowances and superannuation	-	-	-	-
Fruitless payments	76,854	343	67,315	121
Constructive losses	-	-	-	-
Claims waived or abandoned	-	-	-	-
Book-keeping losses	-	-	-	-
Failure to make adequate charges	-	-	-	-
Exchange rate fluctuation losses	227,629	1	-	-
Special payments	-	-	97,929,425	2
Total	2,248,145	-	98,879,264	-

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 no special payments in 2017/18. In 2016/17 there were 2 special payments recorded. 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).

Type of loss	2018 Total £	2018 Number of cases	2017 Total £	2017 Number of cases
Compensation payments	-	-	97,929,425	2
Extra-contractual	-	-	-	-
Total	-	-	97,929,425	-

Magnox PBO Competition Litigation Costs	2018 Total £	2017 Total £
EnergySolutions settlement	-	85,000,000
Bechtel settlement	-	12,345,885
Total	-	97,345,885

### **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.

At 31 March 2018 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.

#### **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.

#### **Office for Nuclear Regulation (ONR) notification of intention to prosecute**

On 11 May 2018 the ONR notified Sellafield Limited of its intention to prosecute the Company in relation to an incident that occurred on 5 February 2017 and which resulted in personal contamination to one of the Company's employees.

Sellafield Limited has been issued with a summons to court appearance in July 2018, and it is likely that the case will take several months to resolve.

#### **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 SLC's. 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.

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 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.



#### **David Peattie**

Accounting Officer and Chief Executive Officer  
26 June 2018



# Audit Report of the Comptroller and Auditor General

## Opinion on financial statements

I have audited the financial statements of the Nuclear Decommissioning Authority for the year ended 31 March 2018 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, including the significant accounting policies. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Accountability Report that is described in that report as having been audited.

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 2018 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 provisions

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 provisions. 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.

Note 24 shows the increase in the liability during 2017-18 arising from the changes in the long term discount rate, underlining the uncertainty inherent in management's estimate associated with the long timescales involved and discount rate assumptions. A further impact of the change to a more negative long term discount rate for provisions is that the later years, for which there is greater uncertainty over the underlying future costs, constitute a larger proportion of the liability estimate thereby amplifying the overall level of uncertainty.

## Opinion on regularity

In my opinion, in all material respects the income and expenditure 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.

## Basis of opinions

I conducted my audit in accordance with International Standards on Auditing (ISAs) (UK) and Practice Note 10 'Audit of Financial Statements of Public Sector Entities in the United

Kingdom'. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my certificate. Those standards require me and my staff to comply with the Financial Reporting Council's Revised Ethical Standard 2016. I am independent of the Nuclear Decommissioning Authority in accordance with the ethical requirements that are relevant to my audit and the financial statements in the UK. My staff and I have fulfilled our other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## Responsibilities of the Authority and Accounting Officer for the financial Statements

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.

## Auditor's responsibilities for the audit of the financial statements

My responsibility is to audit and report on the financial statements in accordance with the Energy Act 2004. 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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (UK), I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's and the Nuclear Decommissioning Authority's internal control;

- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's and the Nuclear Decommissioning Authority's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern;
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation; and
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit. In addition, I am required to obtain evidence sufficient to give reasonable assurance that the income and expenditure reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

#### **Other Information**

The Authority and the Accounting Officer are responsible for the other information. The other information comprises information included in the annual report, other than the parts of the Accountability Report described in that report as having been audited, the financial statements and my auditor's report thereon. My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon. In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

#### **Opinion on other matters**

In my opinion:

- the parts of the Accountability Report to be audited have been properly prepared in accordance with Secretary of State directions made under the Energy Act 2004;
- in the light of the knowledge and understanding of the group, the Authority and its environment obtained in the course of the audit, I have not identified any material misstatements in the Performance Report or the Accountability Report; and
- the information given in the 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 Accountability Report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

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

28 June 2018

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# Accounts and other information

# Annual Accounts

## Consolidated Statement of Comprehensive Net Expenditure

for the year ended 31 March 2018

	note	2018 £m	2017 £m
<b>Expenditure</b>			
Authority administration expenditure	5	44	41
Programme expenditure	6	3,670	3,519
Adjustments to provisions	7	69,461	2,013
Depreciation and impairment	8	100	104
		<b>73,275</b>	5,677
<b>Income</b>	9	<b>(1,064)</b>	(988)
<b>Net expenditure before interest and taxation</b>		<b>72,211</b>	4,689
Interest receivable		(9)	(28)
Interest payable		4	4
Net interest payable on defined benefit pension schemes	26	18	6
<b>Net expenditure before taxation</b>		<b>72,224</b>	4,671
Taxation	10	-	1
<b>Net expenditure after taxation for the year</b>		<b>72,224</b>	4,672
<b>Other comprehensive expenditure / (income):</b>			
Deficit arising on revaluation of Property, Plant and Equipment	11	25	1
Net recognised (gain)/loss on defined benefit pension schemes	26	(81)	398
<b>Total comprehensive net expenditure for the year</b>		<b>72,168</b>	5,071

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 2018

	note	2018 £m	2017 £m
<b>Expenditure</b>			
Authority administration expenditure	5	44	41
Programme expenditure	6	3,575	3,481
Adjustments to provisions	7	69,489	2,431
Depreciation and impairment	8	79	81
		<b>73,187</b>	6,034
<b>Income</b>	9	<b>(1,022)</b>	(961)
<b>Net expenditure before interest and taxation</b>		<b>72,165</b>	5,073
Interest receivable		(1)	(1)
Interest payable		-	-
<b>Net expenditure before taxation</b>		<b>72,164</b>	5,072
Taxation	10	-	1
<b>Net expenditure after taxation for the year</b>		<b>72,164</b>	5,073
<b>Other comprehensive expenditure / (income):</b>			
Deficit arising on revaluation of Property, Plant and Equipment	11	25	1
Actuarial loss on defined benefit pension schemes	26	5	14
<b>Total comprehensive net expenditure for the year</b>		<b>72,194</b>	5,088

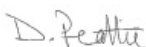
The related notes numbered 1 to 31 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

## Consolidated Statement of Financial Position

as at 31 March 2018

	note	2018 £m	2017 £m
<b>Non-current assets</b>			
Property, plant and equipment	11	830	906
Recoverable contract costs	14	3,346	2,870
Finance lease receivables	20	45	45
Trade and other receivables	21	40	41
<b>Total non-current assets</b>		<b>4,261</b>	3,862
<b>Current assets</b>			
Inventories	16	68	76
Other investments	19	374	356
Finance lease receivables	20	2	2
Trade and other receivables	21	223	224
Cash and cash equivalents	22	214	135
<b>Total current assets</b>		<b>881</b>	793
<b>Total assets</b>		<b>5,142</b>	4,655
<b>Current liabilities</b>			
Trade and other payables	23	(1,463)	(1,615)
Nuclear provisions	24	(2,860)	(3,025)
Other provisions	25	(143)	(176)
<b>Total current liabilities</b>		<b>(4,466)</b>	(4,816)
<b>Total assets less current liabilities</b>		<b>676</b>	(161)
<b>Non-current liabilities</b>			
Trade and other payables	23	(1,620)	(1,416)
Nuclear provisions	24	(230,709)	(160,480)
Other provisions	25	(360)	(457)
Defined benefit pension scheme deficits	26	(706)	(674)
<b>Total non-current liabilities</b>		<b>(233,395)</b>	(163,027)
<b>Net liabilities</b>		<b>(232,719)</b>	(163,188)
<b>Taxpayers' equity</b>			
Revaluation reserve		51	76
General reserve		(232,772)	(163,266)
<b>Total taxpayers' equity</b>		<b>(232,721)</b>	(163,190)
Non-controlling interests	27	2	2
<b>Total equity</b>		<b>(232,719)</b>	(163,188)

The financial statements on pages 68 to 107 were approved by the Board and authorised for issue by the Accounting Officer on 26 June 2018:



**David Peattie**

Chief Executive and Accounting Officer  
26 June 2018

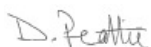
The related notes numbered 1 to 31 form part of these financial statements. Authority refers to the balances within the NDA itself, with NDA Group balances incorporating the Authority and its subsidiaries. Details of subsidiaries are given in note 13.

## Authority Statement of Financial Position

as at 31 March 2018

	note	2018 £m	2017 £m
<b>Non-current assets</b>			
Property, plant and equipment	11	435	500
Investments in subsidiaries	13	259	229
Recoverable contract costs	14	3,346	2,870
Finance lease receivables	20	45	45
Trade and other receivables	21	40	41
<b>Total non-current assets</b>		<b>4,125</b>	3,685
<b>Current assets</b>			
Inventories	16	29	33
Finance lease receivables	20	2	2
Trade and other receivables	21	414	426
Cash and cash equivalents	22	82	69
<b>Total current assets</b>		<b>527</b>	530
<b>Total assets</b>		<b>4,652</b>	4,215
<b>Current liabilities</b>			
Trade and other payables	23	(1,391)	(1,546)
Nuclear provisions	24	(2,855)	(3,023)
Other provisions	25	(141)	(172)
<b>Total current liabilities</b>		<b>(4,387)</b>	(4,741)
<b>Total assets less current liabilities</b>		<b>265</b>	(526)
<b>Non-current liabilities</b>			
Trade and other payables	23	(1,620)	(1,416)
Nuclear provisions	24	(231,211)	(160,975)
Other provisions	25	(334)	(431)
Defined benefit pension scheme deficits	26	(20)	(15)
<b>Total non-current liabilities</b>		<b>(233,185)</b>	(162,837)
<b>Net liabilities</b>		<b>(232,920)</b>	(163,363)
<b>Taxpayers' equity</b>			
Revaluation reserve		26	51
General reserve		(232,946)	(163,414)
<b>Total taxpayers' equity</b>		<b>(232,920)</b>	(163,363)

The financial statements on pages 68 to 107 were approved by the Board and signed on its behalf by



**David Peattie**

Chief Executive and Accounting Officer  
26 June 2018

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 2018

	note	NDA Group		Authority	
		2018	2017	2018	2017
		£m	£m	£m	£m
<b>Cash flows from operating activities</b>					
Net expenditure after taxation for the year	SoCNE	<b>(72,224)</b>	(4,672)	<b>(72,164)</b>	(5,073)
Adjustments for:					
Interest receivable	4	<b>(9)</b>	(28)	<b>(1)</b>	(1)
Dividend income from subsidiary	9	<b>-</b>	-	<b>-</b>	(25)
Interest payable	4	<b>4</b>	4	<b>-</b>	-
Net interest payable on defined benefit pension schemes	26	<b>18</b>	6	<b>-</b>	-
Excess of pension service costs over cash contributions paid		<b>95</b>	44	<b>-</b>	-
Depreciation of property, plant and equipment	11	<b>64</b>	65	<b>43</b>	42
Impairment of property, plant and equipment	11	<b>36</b>	39	<b>36</b>	39
Revalorisation of advance payments	23	<b>181</b>	176	<b>181</b>	176
Amortisation of recoverable contract costs	14	<b>228</b>	203	<b>228</b>	203
Decrease in inventories	16	<b>8</b>	2	<b>4</b>	9
Decrease/(Increase) in receivables		<b>3</b>	(50)	<b>14</b>	(20)
Decrease in payables		<b>(370)</b>	(179)	<b>(374)</b>	(196)
Increase in nuclear provisions impacting net expenditure	7	<b>69,618</b>	3,120	<b>69,644</b>	3,539
Decrease in other provisions impacting net expenditure	7	<b>(157)</b>	(1,107)	<b>(155)</b>	(1,108)
<b>Net cash outflow from operating activities</b>		<b>(2,505)</b>	(2,377)	<b>(2,544)</b>	(2,415)
<b>Cash flows from investing activities</b>					
Interest received	4	<b>9</b>	28	<b>1</b>	1
Dividend received from subsidiary	9	<b>-</b>	-	<b>-</b>	25
Dividend paid to outgoing PBO		<b>-</b>	(12)	<b>-</b>	-
Interest paid	4	<b>(4)</b>	(4)	<b>-</b>	-
Proceeds on disposal of property, plant and equipment	11	<b>-</b>	3	<b>-</b>	-
Purchases of property, plant and equipment	11	<b>(28)</b>	(85)	<b>(39)</b>	(52)
Purchase of investments	19	<b>(18)</b>	(20)	<b>-</b>	-
Acquisition of shares in subsidiary	13	<b>-</b>	-	<b>(30)</b>	-
<b>Net cash outflow from investing activities</b>		<b>(41)</b>	(90)	<b>(68)</b>	(26)
<b>Cash flow from financing activities</b>					
Grants from parent department	SoCTE	<b>3,488</b>	3,210	<b>3,488</b>	3,210
Surrender of receipts to Consolidated Fund	SoCTE	<b>(863)</b>	(762)	<b>(863)</b>	(762)
<b>Net cash inflow from financing activities</b>		<b>2,625</b>	2,448	<b>2,625</b>	2,448
<b>Net increase / (decrease) in cash and cash equivalents</b>		<b>79</b>	(19)	<b>13</b>	7
<b>Cash and cash equivalents at beginning of period</b>	22	<b>135</b>	154	<b>69</b>	62
<b>Cash and cash equivalents at end of period</b>		<b>214</b>	135	<b>82</b>	69



## Statement of Changes in Taxpayers' Equity

for the year ended 31 March 2018

NDA Group	General £m	Revaluation £m	Total £m
<b>Balance at 31 March 2016</b>	(160,640)	77	(160,563)
Adjustment relating to previous period (a)	2	-	2
Deficit arising on revaluation of PPE	-	(1)	(1)
Gross grants from parent department	3,210	-	3,210
Amounts surrenderable to Consolidated Fund (b)	(756)	-	(756)
Actuarial loss on defined benefit pension schemes	(398)	-	(398)
Dividend paid to outgoing PBO of Sellafield Ltd	(12)	-	(12)
Net expenditure	(4,672)	-	(4,672)
<b>Balance at 31 March 2017</b>	(163,266)	76	(163,190)
Deficit arising on revaluation of PPE	-	(25)	(25)
Gross grants from parent department	3,488	-	3,488
Amounts surrenderable to Consolidated Fund (b)	(851)	-	(851)
Actuarial loss on defined benefit pension schemes	81	-	81
Net expenditure	(72,224)	-	(72,224)
<b>Balance at 31 March 2018</b>	(232,772)	51	(232,721)

Authority	General £m	Revaluation £m	Total £m
<b>Balance at 31 March 2016</b>	(160,783)	52	(160,731)
Adjustment relating to previous period (a)	2	-	2
Deficit arising on revaluation of PPE	-	(1)	(1)
Gross grants from parent department	3,210	-	3,210
Amounts surrenderable to Consolidated Fund (b)	(756)	-	(756)
Actuarial loss on defined benefit pension schemes	(14)	-	(14)
Net expenditure	(5,073)	-	(5,073)
<b>Balance at 31 March 2017</b>	(163,414)	51	(163,363)
Deficit arising on revaluation of PPE	-	(25)	(25)
Gross grants from parent department	3,488	-	3,488
Amounts surrenderable to Consolidated Fund (b)	(851)	-	(851)
Actuarial loss on defined benefit pension schemes	(5)	-	(5)
Net expenditure	(72,164)	-	(72,164)
<b>Balance at 31 March 2018</b>	(232,946)	26	(232,920)

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.

- (a) The £2 million credit adjustment to the general reserve in 2016/17 represents the net effect of a £11 million debit to trade receivables and a £9 million credit to payments received on account (note 23).
- (b) Surrender of receipts to Consolidated Fund of £851 million (2017: £756 million) included £1 million receivable as at 31 March 2018 (2017: £11 million payable at 31 March 2017). This amount was included within current trade and other receivables in the Statement of Financial Position of Group and Authority at 31 March 2018. The amount paid in cash in the year was £863 million (2017: £762 million).

## Notes to the financial statements

### for the year ended 31 March 2018

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#### 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 10 to 35 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 for Energy and Climate Change in accordance with section 26 of the Energy Act 2004. The accounts direction requires compliance with the Government Financial Reporting Manual (FRm) 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 FRm apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FRm 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 2018 shows net liabilities of £233 billion (2017: £163 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 2018/19, 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

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 the adoption of IFRS 9 to have a material impact on the financial statements of the NDA Group.

The Authority expects to apply IFRS 15 on a prospective basis (from 1 April 2018). The Authority's contracts for the reprocessing of spent fuel and management of spent fuels, wastes and products are very long term by nature and have already been in place for several decades. The extent to which the Authority is able to retrospectively restate the revenue arising from the contracts (as ordinarily required by IFRS15) is severely limited due to the availability of consistent historical data relating to the contracts and the extent to which the contracts and associated assumptions have changed over time. The Authority has therefore sought and received a derogation from HM Treasury to set aside the requirement to apply IFRS15 retrospectively. This means that there will be no requirement to present restatement adjustments in the first year of application (2018/19).

Under the new standard revenue from contracts will be recognised directly on the fulfilment of contractual performance obligations, which in turn will be measured either on the achievement of measurable outputs or over time. Therefore under the new standard the Income figure is subject to increased uncertainty as a higher proportion of revenue recognition will be dependent on the performance of key plants at Sellafield in the remainder of their commercial operations (specifically to late 2018 for the Thorp reprocessing plant and to circa 2025 for the waste vitrification plant).

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In particular the revenue forecast for 2018/19 is highly reliant on the performance of the Thorp reprocessing plant in its final year of operations. If Thorp does not achieve its expected output for the year, revenue of up to £100 million would not be recognised in 2018/19 and would be recognised in later reporting periods instead. The impact of volatility in Thorp output is more significant under IFRS15 than under previous standards.

Assuming that the performance obligations under each contract are fulfilled in line with existing forecasts, in each annual reporting period from 2018/19 onwards the income figure in the Statement of Comprehensive Net Expenditure is expected to vary by less than 5% compared to the value which would have been reported under the previous applicable standard.

On the basis of the above, the Authority does not expect that the adoption of 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 2016/17 reporting period.

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**

Contract 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. Variations in contract work are included to the extent that they have been agreed with the customer.

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 still to be incurred exceed amounts received to date the balance is shown under non-current assets as recoverable contract costs. Where amounts received to date exceed costs still to be incurred 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 2017 or 31 March 2018.

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)

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### 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.

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.

The Authority also makes contributions to multi-employer defined benefit schemes, for which it is ultimately responsible, but where it is not possible to identify its share of underlying assets and liabilities. Consequently, the Authority's participation in these schemes is accounted for as if they were defined contribution schemes, as permitted under IAS 19.

Further information on the PCSPS and alpha pension schemes can be found within the Remuneration and Our People Report on pages 52 to 61.

#### 2.9 Research and development expenditure

Expenditure on research activities 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 two criteria are met. Firstly the economic element of the asset's value at the reporting date must exceed £100,000, and secondly the proportion of the asset relating to commercial activity should exceed 10%.

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 brought the NDA policy in line with that of BEIS as the sponsoring department.

Existing assets below the new capitalisation threshold were written out during 2016/17. The effect of this change in policy on the 2016/17 figures was negligible.

In line with the accounts direction issued by the Secretary of State for Energy and Climate Change, 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 exceptions to the above are:

- in the depreciation of certain shipping assets which is calculated on a usage, rather than straight-line, basis; and
- in the depreciation of Plant and equipment for which the remaining useful commercial life of the assets is less than 10 years (such assets are depreciated over the remaining useful commercial life).

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.

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## Notes to the financial statements (continued)

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### 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.

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**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 2017/2018 accounts are:

- Short-term rate: between 0 and up to and including 5 years, -2.42% per annum (2016/17: -2.70%)
- Medium-term rate: after 5 and up to and including 10 years, -1.85% per annum (2016/17: -1.95%)
- Long-term rate: exceeding 10 years, -1.56% per annum (2016/17: -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 £830 million.

#### Nuclear Provisions

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

In preparing the estimate of the cost of decommissioning the designated sites, the NDA has focussed in particular on the first 20 years, which represents £56 billion out of the total £234 billion provision (2017: £53 billion out of £164 billion). In undiscounted terms it represents £47 billion out of a total of £121 billion (2017: £47 billion out of £119 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)

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### 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.

Government has indicated that the preferred policy for management of plutonium is for reuse. Any final decision is conditional on business case approval for reuse of the material. Following review of the likely costs of the preferred policy, and the credible alternative of storage and disposal in the long-term, a prudent estimate of £10.0 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. Disclosure of segmental information for the statement of financial position is not provided here as it is not reported to the chief decision maker.

<b>NDA Group 2018</b>	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	<b>Total 2018 £m</b>
<b>Authority administration expenditure</b>	–	–	–	–	–	44	–	<b>44</b>
<b>Programme expenditure</b>	2,474	588	208	110	88	107	95	<b>3,670</b>
Decommissioning costs charged to nuclear provision	(1,703)	(707)	(182)	(55)	(94)	–	–	<b>(2,741)</b>
Decommissioning costs charged to other provisions	(174)	–	–	–	–	–	(2)	<b>(176)</b>
Nuclear Provision increase/(decrease)	47,248	13,745	175	9,471	1,746	–	(26)	<b>72,359</b>
Other provisions increase/(decrease)	19	–	–	–	–	–	–	<b>19</b>
<b>Adjustments to provisions</b>	45,390	13,038	(7)	9,416	1,652	–	(28)	<b>69,461</b>
<b>Depreciation and impairment</b>	79	–	–	–	–	–	21	<b>100</b>
<b>Income (a)</b>	(814)	(12)	(1)	(5)	–	(190)	(42)	<b>(1,064)</b>
<b>Interest payable</b>	–	–	–	–	–	–	22	<b>22</b>
<b>Interest receivable</b>	–	–	–	–	–	(1)	(8)	<b>(9)</b>

**Net expenditure / (income) from continuing operations for the year before taxation**

	47,129	13,614	200	9,521	1,740	(40)	60	<b>72,224</b>
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(a) see note 9 for commentary on major customers

(b) The basis for accounting for transactions between reportable segments is given in note 30.

(c) There have been no changes from the prior period to the measurement methods used to determine reported segment net expenditure.

<b>NDA Group 2017</b>	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	<b>Total 2017 £m</b>
<b>Authority administration expenditure</b>	–	–	–	–	–	41	–	41
<b>Programme expenditure</b>	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)
<b>Adjustments to provisions</b>	1,566	399	(16)	491	(9)	–	(418)	2,013
<b>Depreciation and impairment</b>	81	–	–	–	–	–	23	104
<b>Income (a)</b>	(906)	(14)	(2)	(5)	–	(34)	(27)	(988)
<b>Interest payable</b>	–	–	–	–	–	–	10	10
<b>Interest receivable</b>	–	–	–	–	–	(1)	(27)	(28)

**Net expenditure / (income) from continuing operations for the year before taxation**

	3,125	905	197	592	68	185	(401)	4,671
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(a) see note 9 for commentary on major customers

(b) The basis for accounting for transactions between reportable segments is given in note 30.

(c) There have been no changes from the prior period to the measurement methods used to determine reported segment net expenditure.

## 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:

	<b>2018</b>	2017
	<b>£m</b>	£m
United Kingdom	<b>613</b>	704
Germany	<b>101</b>	37
Japan	<b>139</b>	136
Italy	<b>197</b>	13
Other countries	<b>14</b>	98
Total income	<b>1,064</b>	988

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

**5. Authority administration expenditure**

<b>Authority</b>	<b>2018</b>	2017
	<b>£m</b>	£m
Staff costs (see Remuneration and Our People Report)	<b>26</b>	25
Administration costs	<b>15</b>	12
Rentals under operating leases – other	<b>3</b>	4
Auditors' remuneration	<b>–</b>	–
	<b>44</b>	41

Directors' emoluments are included in the above figures and can be seen in the Remuneration and Our People Report on pages 52 to 62.

Auditors' remuneration represents fees payable to the NAO for the audit of the Authority and the NDA Group and amounted to £340,000 (2017: £350,000). No other remuneration has been paid to the NAO.

**6. Programme expenditure**

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018</b>	2017	<b>2018</b>	2017
<b>NDA Group &amp; Authority</b>	<b>£m</b>	£m	<b>£m</b>	£m
Contractor and subsidiary costs (a), (b)	<b>3,100</b>	2,912	<b>3,024</b>	2,887
Amortisation of recoverable contract costs (see note 14)	<b>228</b>	203	<b>228</b>	203
Revalorisation of advance payments (see note 23)	<b>181</b>	176	<b>181</b>	176
Litigation costs	<b>–</b>	106	<b>–</b>	106
Fees payable to SLCs	<b>56</b>	56	<b>56</b>	56
Trading costs	<b>36</b>	37	<b>36</b>	37
Rentals under operating leases – other	<b>21</b>	15	<b>–</b>	–
Pension deficit repair payment	<b>–</b>	15	<b>–</b>	15
Research and development costs	<b>11</b>	9	<b>7</b>	5
Insurance (c)	<b>–</b>	9	<b>6</b>	15
Skills and socio-economic development programme	<b>3</b>	3	<b>3</b>	3
Release of fees previously accrued	<b>–</b>	(33)	<b>–</b>	(33)
Material title transfer	<b>18</b>	–	<b>18</b>	–
Dividend payable to minority interest	<b>1</b>	–	<b>–</b>	–
Other costs	<b>15</b>	11	<b>16</b>	11
Programme expenditure	<b>3,670</b>	3,519	<b>3,575</b>	3,481

(a) Contractor and subsidiary costs shown are after deduction for capitalisation of £9 million (2017: £35 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 £321,592 (2017: £269,211).

(c) Insurance costs in both Authority and NDA Group for 2017/18 are shown after deduction of a £4 million adjustment relating to 2016/17.

## 7. Adjustments to provisions

NDA Group & Authority	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
Movement in nuclear provisions:				
Provided for in the year (see note 24)	<b>73,623</b>	7,406	<b>73,622</b>	7,406
In-year group provision adjustment (see note 24)	<b>(27)</b>	(419)	<b>-</b>	-
Unwinding of discount (see note 24)	<b>(1,237)</b>	(1,231)	<b>(1,237)</b>	(1,231)
	<b>72,359</b>	5,756	<b>72,385</b>	6,175
Release of provision (see note 24)	<b>(2,741)</b>	(2,636)	<b>(2,741)</b>	(2,636)
	<b>69,618</b>	3,120	<b>69,644</b>	3,539
Movement in other provisions:				
Provided for in the year (see note 25)	<b>35</b>	(946)	<b>35</b>	(947)
Unwinding of discount (see note 25)	<b>(16)</b>	(18)	<b>(16)</b>	(18)
	<b>19</b>	(964)	<b>19</b>	(965)
Release of provision (see note 25)	<b>(176)</b>	(143)	<b>(174)</b>	(143)
	<b>(157)</b>	(1,107)	<b>(155)</b>	(1,108)
Total provisions movement	<b>69,461</b>	2,013	<b>69,489</b>	2,431

## 8. Depreciation and impairment

NDA Group & Authority	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
Depreciation of PPE (see note 11)	<b>64</b>	65	<b>43</b>	42
Impairment of PPE (see note 11)	<b>36</b>	39	<b>36</b>	39
	<b>100</b>	104	<b>79</b>	81

## 9. Income

NDA Group & Authority	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
Reprocessing and transport, waste management and storage (a), (b), (c), (d)	<b>862</b>	951	<b>819</b>	914
Waste substitution (d)	<b>182</b>	-	<b>182</b>	-
Energy trading (c)	<b>12</b>	14	<b>12</b>	14
Gain on bargain purchase (e)	<b>-</b>	12	<b>-</b>	-
Sundry	<b>3</b>	5	<b>1</b>	2
Rental income	<b>3</b>	2	<b>1</b>	2
Admin / non-programme	<b>2</b>	4	<b>7</b>	4
Dividend from subsidiary	<b>-</b>	-	<b>-</b>	25
	<b>1,064</b>	988	<b>1,022</b>	961

- (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 per cent of total revenues in the year, being £11 million (2017: £14 million) for electricity generation activities and £515 million (2017: £593 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) During 2017/18 NDA completed a one-off waste substitution deal with SOGIN for £182 million (2016/17: nil). Waste management and storage income includes £9 million in respect of SOGIN (2016/17: £2 million). Therefore total revenues from transactions with SOGIN amounted to more than 10 per cent of total revenues in the year, being £191 million (2016/17: £2 million).
- (e) 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 £12 million, giving rise to a gain on bargain purchase of £12 million. A corresponding dividend payment of £12 million 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.

<b>NDA Group &amp; Authority</b>	<b>2018</b>	2017
	<b>£m</b>	£m
NDA Group net expenditure before tax	72,224	4,671
Deficit on ordinary activities before tax at the UK standard rate of corporation tax of 19% (2017: 20%)	13,722	934
Effects of:		
Income and expenditure which is not taxable or tax deductible	(13,558)	(755)
Capital allowances for the year in excess of depreciation	113	111
Unutilised losses	(277)	(290)
Current tax charge for the year	–	–
Diverted Profits Tax	–	<b>1</b>
Deferred tax release	–	–
Total tax charge / (credit)	–	<b>1</b>

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 following a change in regulations on controlled foreign companies. The NDA is liable for Corporation Tax on the activities of Rutherford Indemnity Limited, NDA's wholly-owned captive insurance company based in Guernsey.

**11. Property, plant and equipment**

<b>NDA Group 2018</b>	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
<b>Cost or valuation</b>							
At 1 April 2017	62	2,135	5	4,651	51	209	7,113
Adjustment in respect of previous period (g)	–	1	–	1	10	(12)	–
Revaluations	(25)	(1)	–	–	–	–	(26)
Additions	–	–	–	–	–	28	28
Other reclassifications (f)	–	–	–	100	10	(88)	22
Disposals	–	–	–	(6)	(1)	–	(7)
Impairment (c)	–	–	–	(4)	–	(33)	(37)
<b>At 31 March 2018</b>	<b>37</b>	<b>2,135</b>	<b>5</b>	<b>4,742</b>	<b>70</b>	<b>104</b>	<b>7,093</b>
<b>Depreciation</b>							
At 1 April 2017	–	(2,063)	(4)	(4,115)	(25)	–	(6,207)
Charged in year	–	(3)	–	(56)	(5)	–	(64)
Disposals	–	–	–	6	1	–	7
Impairment (c)	–	–	–	1	–	–	1
<b>At 31 March 2018</b>	<b>–</b>	<b>(2,066)</b>	<b>(4)</b>	<b>(4,164)</b>	<b>(29)</b>	<b>–</b>	<b>(6,263)</b>
Net book value at 31 March 2017	62	72	1	536	26	209	906
<b>Net book value at 31 March 2018</b>	<b>37</b>	<b>69</b>	<b>1</b>	<b>578</b>	<b>41</b>	<b>104</b>	<b>830</b>

The net book value of plant and equipment at 31 March 2018 (£578 million) includes £293 million relating to future decommissioning costs.



## 11. Property, plant and equipment (continued)

	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
<b>NDA Group 2017</b>							
<b>Cost or valuation</b>							
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)
<b>At 31 March 2017</b>	<b>62</b>	<b>2,135</b>	<b>5</b>	<b>4,651</b>	<b>51</b>	<b>209</b>	<b>7,113</b>
<b>Depreciation</b>							
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
<b>At 31 March 2017</b>	<b>–</b>	<b>(2,063)</b>	<b>(4)</b>	<b>(4,115)</b>	<b>(25)</b>	<b>–</b>	<b>(6,207)</b>
Net book value at 31 March 2016	67	53	1	533	32	179	865
<b>Net book value at 31 March 2017</b>	<b>62</b>	<b>72</b>	<b>1</b>	<b>536</b>	<b>26</b>	<b>209</b>	<b>906</b>

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

	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
<b>Authority 2018</b>							
<b>Cost or valuation</b>							
At 1 April 2017	58	2,069	3	4,167	4	197	6,498
Revaluations	(25)	–	–	–	–	–	(25)
Additions	–	22	–	–	–	17	39
Other reclassifications	–	–	–	78	–	(78)	–
Impairment (c)	–	–	–	(5)	–	(32)	(37)
<b>At 31 March 2018</b>	<b>33</b>	<b>2,091</b>	<b>3</b>	<b>4,240</b>	<b>4</b>	<b>104</b>	<b>6,475</b>
<b>Depreciation</b>							
At 1 April 2017	–	(2,064)	(3)	(3,930)	(1)	–	(5,998)
Charged in year	–	(2)	–	(41)	–	–	(43)
Impairment (c)	–	–	–	1	–	–	1
<b>At 31 March 2018</b>	<b>–</b>	<b>(2,066)</b>	<b>(3)</b>	<b>(3,970)</b>	<b>(1)</b>	<b>–</b>	<b>(6,040)</b>
Net book value at 31 March 2017	58	5	–	237	3	197	500
<b>Net book value at 31 March 2018</b>	<b>33</b>	<b>25</b>	<b>–</b>	<b>270</b>	<b>3</b>	<b>104</b>	<b>435</b>

The net book value of plant and equipment at 31 March 2018 (£270 million) includes £125 million relating to future decommissioning costs.

## Notes to the financial statements (continued)

**11. Property, plant and equipment (continued)**

<b>Authority 2017</b>	Land £m	Buildings £m	Fixtures and fittings £m	Plant and equipment £m	Transport equipment £m	Assets under construction £m	Total £m
<b>Cost or valuation</b>							
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	–	–	–	5	–	(5)	–
Impairment (c)	(3)	–	–	(17)	–	(22)	(42)
<b>At 31 March 2017</b>	<b>58</b>	<b>2,069</b>	<b>3</b>	<b>4,167</b>	<b>4</b>	<b>197</b>	<b>6,498</b>
<b>Depreciation</b>							
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
<b>At 31 March 2017</b>	<b>–</b>	<b>(2,064)</b>	<b>(3)</b>	<b>(3,930)</b>	<b>(1)</b>	<b>–</b>	<b>(5,998)</b>
Net book value at 31 March 2016	63	7	–	285	3	172	530
<b>Net book value at 31 March 2017</b>	<b>58</b>	<b>5</b>	<b>–</b>	<b>237</b>	<b>3</b>	<b>197</b>	<b>500</b>

The net book value of plant and equipment at 31 March 2017 (£237 million) includes £137 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 2018 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 £36 million (2017: £39 million) relates to commercial assets at Sellafield, of which £34 million (2017: £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 £22 million (2017: £20 million).

(e) during 2016/17 NDA eliminated fully depreciated assets no longer performing commercial activity, which had a gross book value and accumulated depreciation of £158 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 £22 million was recognised in the year (2017: £68 million increase), see note 24.

(g) the adjustment in respect of previous period reflects reclassifications between asset classes in 2016/17 in one of the subsidiaries, which weren't reflected in NDA Group accounts until 2016/17.

## 12. Intangible assets

Intangible assets had no economic value at 31 March 2018 and 31 March 2017.

## 13. Investments in subsidiaries

<b>Authority</b>	<b>2018</b>	2017
	<b>£m</b>	£m
<b>Cost</b>		
At 1 April	<b>229</b>	229
Additions	<b>30</b>	–
<b>At 31 March</b>	<b>259</b>	<b>229</b>
<b>Impairment</b>		
At 1 April	–	–
Reversal	–	–
<b>At 31 March</b>	<b>–</b>	<b>–</b>
Net book value at 1 April	<b>229</b>	229
<b>Net book value at 31 March</b>	<b>259</b>	<b>229</b>

Details of the Authority's subsidiaries at 31 March 2018 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 France SAS (i)	France	Transportation of spent fuel	100
International Nuclear Services Japan KK (i)	Japan	Transportation of spent fuel	100
International Nuclear Services Ltd (INS Ltd)	UK	Contract management and the transportation of spent fuel, reprocessing products and waste	100
NDA Properties Ltd	UK	Property management	100
Pacific Nuclear Transport Ltd (i)	UK	Transportation of spent fuel, reprocessing products and waste	68.75
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 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 Limited, a company limited by guarantee registered in Scotland and contributing to socio-economic development in the North Highland region. NDA's liability is limited to £100.

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

## Notes to the financial statements (continued)

**14. Recoverable contract costs**

The NDA Authority and Group 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).

<b>NDA Group and Authority</b>	<b>2018</b>	2017
	<b>£m</b>	£m
Recoverable contract costs relating to Nuclear Provisions:		
Gross recoverable contract costs	<b>7,081</b>	6,885
Less applicable payments received on account (see note 23)	<b>(3,192)</b>	(3,445)
Less associated contract loss provisions (see note 25)	<b>(543)</b>	(570)
	<b>3,346</b>	2,870

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

<b>NDA Group and Authority</b>	<b>2018</b>			2017		
	<b>Historic costs</b>	<b>Future costs</b>	<b>Total costs</b>	Historic costs	Future costs	Total costs
	£m	£m	£m	£m	£m	£m
Balance as at 1 April	<b>2,011</b>	<b>4,874</b>	<b>6,885</b>	2,214	5,008	7,222
Increase in year (see note 24)	–	<b>764</b>	<b>764</b>	–	174	174
Unwind of discount (see note 24)	–	<b>(49)</b>	<b>(49)</b>	–	(42)	(42)
Amortisation (see note 6)	<b>(228)</b>	–	<b>(228)</b>	(203)	–	(203)
Release in year (see note 24)	–	<b>(291)</b>	<b>(291)</b>	–	(266)	(266)
Balance as at 31 March	<b>1,783</b>	<b>5,298</b>	<b>7,081</b>	2,011	4,874	6,885

**15. Deferred taxation****Deferred tax liability not recognised**

There were no unrecognised deferred tax liabilities at 31 March 2018 or 31 March 2017.

**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:

<b>NDA Group</b>	<b>2018</b>	2017
	<b>£m</b>	£m
Tax losses	1,220	1,054
Accelerated capital allowances	557	530
Intangibles	6	7
Short term timing differences	7	2
Deferred tax asset at UK standard rate of Corporation Tax for 2018 of 19% (2017: 20%)	1,790	1,593

**16. Inventories**

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018</b>	2017	<b>2018</b>	2017
	<b>£m</b>	£m	<b>£m</b>	£m
Raw materials and consumables	<b>36</b>	40	<b>29</b>	33
Work-in-progress	<b>32</b>	36	<b>–</b>	–
	<b>68</b>	76	<b>29</b>	33

The cost of raw materials and consumables recognised as an expense in the year was £80 million in Authority (2017: £72 million) and £86 million in NDA Group (2017: £78 million).

Work-in-progress recognised as an expense in the year in both Authority and NDA Group was £4 million (2017: £9 million).

## 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:

	note	NDA Group		Authority	
		2018 £m	2017 £m	2018 £m	2017 £m
Financial assets					
Fair value through profit or loss (FVTPL):					
Other investments	19	<b>374</b>	356	<b>-</b>	-
Loans and receivables:					
Non-current finance lease receivable	20	<b>45</b>	45	<b>45</b>	45
Non-current other receivables	21	<b>10</b>	10	<b>10</b>	10
Current trade and other receivables (a)	21	<b>121</b>	128	<b>317</b>	334
Current finance lease receivables	20	<b>2</b>	2	<b>2</b>	2
Cash and cash equivalents	22	<b>214</b>	135	<b>82</b>	69
		<b>766</b>	676	<b>456</b>	460
	note	NDA Group		Authority	
		2018 £m	2017 £m	2018 £m	2017 £m
Financial liabilities					
Fair value through profit or loss (FVTPL):					
Current trade and other payables (b)	23	<b>(737)</b>	(827)	<b>(729)</b>	(818)
		<b>(737)</b>	(827)	<b>(729)</b>	(818)

(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 2018 (2017: £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.

The risk to NDA in relation to electricity prices is not 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	
	2018 £m	2017 £m	2018 £m	2017 £m
Investments carried at fair value:				
Bank deposits	47	39	-	-
Managed investments	327	317	-	-
	<b>374</b>	356	-	-

Managed investments comprises of 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	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Amounts receivable under finance leases:</b>				
Not later than one year	2	1	2	1
Later than one year and not later than five years	6	6	6	6
Later than five years	175	178	175	178
	<b>183</b>	185	<b>183</b>	185
Less: unearned finance income	(136)	(138)	(136)	(138)
Present value of minimum lease payments receivable	<b>47</b>	47	<b>47</b>	47

## 20. Finance lease receivables (continued)

	Present value of minimum lease payments			
	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Amounts receivable under finance leases:</b>				
Not later than 1 year	2	2	2	2
Later than 1 year and not later than 5 years	5	6	5	6
Later than 5 years	40	39	40	39
Present value of minimum lease payments receivable	47	47	47	47

	Present value of minimum lease payments			
	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Of which:</b>				
Non-current assets	45	45	45	45
Current assets	2	2	2	2
Present value of minimum lease payments receivable	47	47	47	47

The finance lease receivable relates to:

- land and buildings of the Springfields Fuels operation which was disposed of to Westinghouse Electric UK Holdings Limited by way of a 150 year lease on 1 April 2010. The interest rate inherent in the lease was fixed at the contract date for all of the lease term. The average effective interest rate contracted approximates to 3.50% per annum
- 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	
	2018 £m	2017 £m	2018 £m	2017 £m
Non-current:				
Prepayments	30	31	30	31
Other receivables	10	10	10	10
	40	41	40	41
Current:				
Trade receivables	48	66	262	287
Less: allowance for doubtful debts	-	-	-	-
	48	66	262	287
Accrued income	40	36	44	36
Amounts receivable from Consolidated Fund	1	-	1	-
Other receivables	32	26	10	11
	121	128	317	334
Prepayments	10	8	6	5
VAT	92	88	91	87
	223	224	414	426

## 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 2018. These payments are refundable to the NDA from the appropriate pension scheme at or after the date on which the individual concerned would have reached normal retirement age.

**Credit risk**

NDA retains two electricity generating assets, producing power which is sold directly to EdF Energy under the terms of a trading contract. Due to the relatively low volume of electricity generated, and the terms of the 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 £10 million (2017: £4 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	
	2018 £m	2017 £m	2018 £m	2017 £m
Neither impaired nor past due	<b>45</b>	62	<b>260</b>	286
Not impaired but past due in the following periods:				
Within 30 days	<b>2</b>	3	<b>-</b>	-
31 to 60 days	<b>1</b>	-	<b>1</b>	-
Over 120 days	<b>-</b>	1	<b>1</b>	1
Total	<b>48</b>	66	<b>262</b>	287

There was no allowance for doubtful debts made at 31 March 2018 or 31 March 2017, 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	
	2018 £m	2017 £m	2018 £m	2017 £m
Balance at 1 April	<b>135</b>	154	<b>69</b>	62
Net change in cash and cash equivalent balances	<b>79</b>	(19)	<b>13</b>	7
Balance at 31 March	<b>214</b>	135	<b>82</b>	69
The balances at 31 March were held at:				
Commercial banks	<b>128</b>	60	<b>1</b>	-
Government Banking Service	<b>86</b>	75	<b>81</b>	69
	<b>214</b>	135	<b>82</b>	69

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	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Current:</b>				
Trade payables	224	203	278	247
Receipts to surrender to the Consolidated Fund	-	11	-	11
Other payables	9	2	-	1
Accruals	504	611	451	559
	<b>737</b>	827	<b>729</b>	818
Other taxes and social security	52	48	-	1
Payments received on account	660	725	654	719
Deferred income	14	15	8	8
	<b>1,463</b>	1,615	<b>1,391</b>	1,546

<b>Non-current:</b>				
Payments received on account	1,620	1,416	1,620	1,416

	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Movements on gross payments received on account</b>				
Balance at 1 April	5,586	5,702	5,580	5,696
Adjustment relating to previous period	-	9	-	9
Reclassification to accrued income	3	2	3	2
Revalorisation (see note 6)	181	176	181	176
Amounts received	690	551	690	551
Released to income	(988)	(854)	(988)	(854)
Balance at 31 March	<b>5,472</b>	5,586	<b>5,466</b>	5,580

	NDA Group		Authority	
	2018 £m	2017 £m	2018 £m	2017 £m
Gross payments on account at 31 March	5,472	5,586	5,466	5,580
Deduction of recoverable contract costs (see note 14)	(3,192)	(3,445)	(3,192)	(3,445)
Net payments on account at 31 March	<b>2,280</b>	2,141	<b>2,274</b>	2,135
Of which:				
Current	660	725	654	719
Non-current	1,620	1,416	1,620	1,416
	<b>2,280</b>	2,141	<b>2,274</b>	2,135

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	
	2018 £m	2017 £m	2018 £m	2017 £m
<b>Balance at 1 April</b>	<b>163,505</b>	160,672	<b>163,998</b>	160,593
Provided for in the year and charged to:				
– Statement of Comprehensive Net Expenditure (note 7)	<b>73,623</b>	7,406	<b>73,622</b>	7,406
– Recoverable contract costs (a) (note 14)	<b>764</b>	174	<b>764</b>	174
Unwinding of discount charged to:				
– Statement of Comprehensive Net Expenditure (note 7)	<b>(1,237)</b>	(1,231)	<b>(1,237)</b>	(1,231)
– Recoverable contract costs (a) (note 14)	<b>(49)</b>	(42)	<b>(49)</b>	(42)
Decommissioning costs utilised in the year (note 7)	<b>(2,741)</b>	(2,636)	<b>(2,741)</b>	(2,636)
Recoverable contract costs released in year (note 14)	<b>(291)</b>	(266)	<b>(291)</b>	(266)
Opening group provision adjustment (b) (note 26)	-	(221)	-	-
In-year group provision adjustment (b) (note 7)	<b>(27)</b>	(419)	-	-
Provision changes impacting property, plant and equipment (note 11)	<b>22</b>	68	-	-
<b>Total change in provision</b>	<b>70,064</b>	2,833	<b>70,068</b>	3,405
<b>Balance at 31 March</b>	<b>233,569</b>	163,505	<b>234,066</b>	163,998
Of which:				
Current	<b>2,860</b>	3,025	<b>2,855</b>	3,023
Non-current	<b>230,709</b>	160,480	<b>231,211</b>	160,975
	<b>233,569</b>	163,505	<b>234,066</b>	163,998

(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 2018 (NDA Group and Authority) is £5,298 million (2017: £4,874 million) - see note 14.

(b) Sellafield Ltd became a subsidiary of the NDA on 1 April 2016 and was 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 2017/18 increase in this pension deficit of £27 million (2016/17: £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 one years' discount shown in adjustments to provisions in the Statement of Comprehensive Net Expenditure. An increase of 0.5% in the discount rate would reduce the provision to £185 billion, whilst a decrease in discount rate of 0.5% would increase the provision to £303 billion.

The change in discount rates (see note 2.16) in the current financial year produced an increase of £65,973 million (2017: £1,446 million increase).

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 2017 values to current price levels. The overall increase in the provision was £70,064 million (2017: £2,833 million) of which the Authority estimates that £5,326 million related to changes in price levels (2017: £4,897 million).

A total of £3,032 million (2017: £2,902 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 2017, 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 £22 million was recognised in the year (2017: £68 million increase).



## 24. Nuclear Provisions (continued)

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

<b>NDA Group</b>	Waste £m	Research £m	Sellafield £m	Fuel manufacturing and generation £m	Others £m	<b>2018 Total £m</b>	2017 Total £m
Within 1 year	71	306	1,940	480	63	2,860	3,024
2–5 years	372	1,121	8,291	1,459	338	11,581	11,782
6–20 years	2,569	1,613	35,010	1,516	875	41,583	38,300
21–50 years	5,857	324	54,643	1,340	779	62,943	46,946
After 50 years	16,057	148	66,007	32,645	412	115,269	64,093
	24,926	3,512	165,891	37,440	2,467	234,236	164,145
Deduction in respect of Sellafield pension deficit (b)						(667)	(640)
Total NDA Group						233,569	163,505
Sensitivity							
Increase	76,564	134	175,081	15,590	123		
Reduction	(10,494)	(269)	(29,180)	(15,590)	(247)		

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, with the key sensitivities being in the timing and costs of constructing and operating the GDF. The above range from a reduction of £10,494 million to an increase of £76,564 million reflects three separate sensitivities:
  - The potentially higher costs of constructing and operating the GDF itself, which dependent on the location and construction requirements of the facility, could be up to £62,964 million higher (or £10,494 million lower) than the base case assumption
  - The impact of the timing of the facility's construction and operations. The current planned date for the facility to receive waste is 2045. NDA has identified a risk that the construction and opening of the facility may be delayed beyond 2045 (see Governance Statement on page 49). A delay to this date may increase the cost of the facility itself, along with the cost of interim storage of waste at sites across the NDA estate. A delay of a small number of years is considered to be within the overall tolerance of the estimate for GDF construction and waste transfer, and is not considered to have a material impact on the provision estimate. A longer delay of say 20 years could materially impact the provision, by approximately £3,600 million when combined with a managed deferral of other programmes.
  - A delay of 20 years would not necessarily increase the underlying costs of the facility, but would increase the discounted value of the estimate by approximately £10 billion due to the effect of long term negative discount rates.
- activities on the sites primarily used for research (Dounreay, Harwell, and 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 £269 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 £134 million.
- Sellafield represents activities associated with operation of the site, reprocessing and eventual decommissioning, and includes all site overheads. Principal sensitivities are around the cost of delivering the plan, particularly the costs of new construction, decommissioning and post operational clean out (POCO) work in the long-term (beyond the next twenty years). The potential costs range from a £29,180 million reduction against the current estimate, to a £175,081 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 £15,590 million. Conversely a reduction in the costs associated with this phase may reduce costs by £15,590 million.

## Notes to the financial statements (continued)

**25. Other provisions**

<b>NDA Group</b>	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
<b>Balance at 31 March 2016</b>	77	2,195	37	2,309
Adjustment relating to previous period	–	–	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)
<b>Balance at 31 March 2017</b>	72	1,094	37	1,203
Provided for in the year (see note 7)	–	35	–	35
Released in the year (see note 7)	(9)	(165)	(2)	(176)
Unwinding of discount (see note 7)	–	(16)	–	(16)
<b>Balance at 31 March 2018</b>	63	948	35	1,046

<b>Authority</b>	Restructuring £m	Contract loss £m	Other £m	Total £m
Movements in gross provisions				
<b>Balance at 31 March 2016</b>	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)
<b>Balance at 31 March 2017</b>	70	1,092	11	1,173
Provided for in the year (see note 7)	(4)	39	–	35
Released in the year (see note 7)	(8)	(165)	(1)	(174)
Unwinding of discount (see note 7)	(1)	(15)	–	(16)
<b>Balance at 31 March 2018</b>	57	951	10	1,018

**Analysis of net provisions**

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018 £m</b>	2017 £m	<b>2018 £m</b>	2017 £m
<b>Balance at 31 March</b>	<b>1,046</b>	1,203	<b>1,018</b>	1,173
Amount deducted from recoverable contract costs (see note 14)	<b>(543)</b>	(570)	<b>(543)</b>	(570)
<b>Net balance at 31 March</b>	<b>503</b>	633	<b>475</b>	603
Of which:				
Current	<b>143</b>	176	<b>141</b>	172
2 to 5 years	<b>177</b>	225	<b>151</b>	200
After 5 years	<b>183</b>	232	<b>183</b>	231
Non-current	<b>360</b>	457	<b>334</b>	431
	<b>503</b>	633	<b>475</b>	603

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 2018. 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 comprises 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.

### 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, details are described on page 59). 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.

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

Sellafield Limited 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 two industry wide defined contribution schemes: the Merchant Navy Officers' Pension Plan (MNOPP) and the Merchant Navy Ratings' Pension Plan (MNRPP).

The total cost charged to expenditure of £26,794,000 (2017: £23,673,000) 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 Limited 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 Limited employees up to 24 November 2008 when it was closed to new entrants.

A small number of Sellafield Limited employees participate in the Magnox Electric Group section of the Electricity Supply Pension Scheme. Participation in this scheme is in a section with other employers and Sellafield Limited is unable to identify its share of the underlying assets and liabilities. Consequently Sellafield Limited's participation in this scheme is accounted for as if it were a defined contribution scheme, as permitted under IAS 19. Sellafield Limited'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.

## Notes to the financial statements (continued)

**26. Retirement benefit schemes (continued)****Merchant Navy Officers Pension Fund (MNOFP)**

PNTL employees participate in the Merchant Navy Officers Pension Fund (MNOFP). The MNOFP is an industry wide defined benefit (final salary) funded pension scheme. The scheme was closed on 1 November 1996. All costs relating to 'Pacific' vessels are recoverable under contract from customers and hence a recoverable amount is recognised to offset the related pension scheme deficit.

**Merchant Navy Ratings Pension Fund (MNRPF)**

PNTL employees participate in the Merchant Navy Ratings Pension Fund (MNRPF). The MNRPF is an industry wide defined benefit (final salary) funded pension scheme. The scheme was closed on 31 May 2001. The liabilities of the scheme have been capped at the level of benefits accrued to employees at the closure date, subject to adjustment for future actuarial valuations. All costs relating to 'Pacific' vessels are recoverable under contract from customers and hence a recoverable amount is recognised to offset the related pension scheme deficit.

In relation to the CNPP it is noted that:

- the scheme is sectionalised and individual sections cannot be liable for any other sections' obligations under the rules of the scheme;
- there is no agreed allocation of any surplus or deficit should a participating employer withdraw from the scheme or on wind up. In such an event the participating employer's obligations would be subject to negotiation with the relevant scheme trustees in light of the funding position of the scheme at that time.
- The aggregate average duration of the CNPP obligation is 23 years (2017: 21 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 14 years (2017: 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 2018 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.

## 26. Retirement benefit schemes (continued)

### NDA Group

#### Employee benefit obligations

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

	2018 £m	2017 £m
Benefit obligations	2,841	2,675
Fair value of scheme assets	(2,136)	(2,002)
<b>Deficit in schemes</b>	<b>705</b>	<b>673</b>
Unrecognised asset under IAS 19 para 64b *	1	1
Receivable from third parties	–	–
<b>Net deficit recognised in schemes</b>	<b>706</b>	<b>674</b>

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

#### Statement of Comprehensive Net Expenditure

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

	2018 £m	2017 £m
Current service cost	173	126
Net interest on net defined benefit (DB) assets / liabilities	18	6
<b>Net cost in SoCNE</b>	<b>191</b>	<b>132</b>
Actuarial (gain) / loss	(81)	401
Movement in unrecognised asset under IAS 19 para 64b	–	(3)
Receivable from third parties	–	–
<b>Actuarial (gain) / loss recognised in OCE</b>	<b>(81)</b>	<b>398</b>

#### Changes in the present value of the defined benefit obligations

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

	2018 £m	2017 £m
Opening defined benefit obligation	2,675	223
Acquisition of Sellafeld Ltd	–	1,612
Current service cost	173	126
Net interest on scheme liabilities	69	64
Employee contributions	18	18
Actuarial (gain) / loss	(55)	660
Benefits paid	(39)	(28)
<b>Closing defined benefit obligation</b>	<b>2,841</b>	<b>2,675</b>

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

	2018 £m	2017 £m
Opening fair value of scheme assets	2,002	222
Acquisition of Sellafeld Ltd	–	1,391
Interest income on scheme assets	51	58
Actuarial gain	26	259
Employer contributions	78	82
Employee contributions	18	18
Benefits paid	(39)	(28)
<b>Closing fair value of scheme assets</b>	<b>2,136</b>	<b>2,002</b>



## Notes to the financial statements (continued)

**26. Retirement benefit schemes (continued)****Changes in the value of unrecognised assets under IAS19 para 58b are as follows:**

	<b>2018</b>	2017
	<b>£m</b>	£m
Opening value of unrecognised assets	1	4
Movement in unrecognised assets	-	(3)
<b>Closing value of unrecognised assets</b>	<b>1</b>	<b>1</b>

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

	<b>2018</b>	2017
	<b>£m</b>	£m
Contributions including deficit repair payments	86	79

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

	<b>2018</b>	2017
	<b>%</b>	%
Equities	49	50
Property	12	10
Fixed Interest Gilts	2	2
Index Linked Gilts	10	12
Corporate Bonds	10	10
Hedge funds	-	-
Credit investment	17	15
Cash	-	1
<b>Total</b>	<b>100</b>	<b>100</b>

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

	<b>2018</b>	2017
	<b>%</b>	%
Discount rate	2.55	2.50
Future salary increases *	1.00–2.90	3.20–3.70
Rate of increase of pensions in payment	3.30–3.45	3.10–3.20
Rate of increase of pensions in deferment	2.30–3.45	2.20–3.20
Retail Price Inflation	3.45	3.20
Life expectancy for a male pensioner aged 65 (in years)	21.9	21.8
Life expectancy for a male non-pensioner currently aged 45 from age 65 (in years)	23.1	23.1

\* For those schemes with members accruing benefits future salary increases for 2018 are assumed to be 1.0% for the next 2 years, 2.3% each of the following 10 years, and then 2.8% thereafter.

**Mortality assumption****2018**

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

**2017**

S1NA Year of Birth tables with CMI 2015 projections subject to minimum improvements of 1% trend for males and females

	<b>2018</b>	2017	2016	2015	2014
	<b>£'000</b>	£'000	£'000	£'000	£'000
Experience adjustments on plan liabilities	<b>(57)</b>	(5)	16	(2)	4
Experience adjustments on plan assets	<b>26</b>	259	(16)	27	(1)

**Sensitivity analysis**

Change to	Change in assumption	Impact on DB obligation as at 31.03.18	Change in assumption	Impact on DB obligation as at 31.03.18
Discount rate	Increase by 0.5%	-11%	Decrease by 0.5%	12%
Rate of salary increase	Increase by 0.5%	4%	Decrease by 0.5%	-3%
Rate of price inflation	Increase by 0.5%	12%	Decrease by 0.5%	-11%
Rate of mortality	Increase by 1 year	4%		

## 26. Retirement benefit schemes (continued)

### Authority

#### Employee benefit obligations

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

	2018 £m	2017 £m
Benefit obligations	154	148
Fair value of scheme assets	(134)	(133)
<b>Deficit in schemes</b>	<b>20</b>	<b>15</b>
Receivable from third parties	–	–
<b>Net deficit recognised in schemes</b>	<b>20</b>	<b>15</b>

#### Statement of Comprehensive Net Expenditure

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

	2018 £m	2017 £m
Current service cost	–	–
Net interest on net defined benefit assets / liabilities	–	–
<b>Net cost in SoCNE</b>	<b>–</b>	<b>–</b>
Actuarial loss	5	14
Receivable from third parties	–	–
<b>Actuarial loss recognised in OCE</b>	<b>5</b>	<b>14</b>

#### Changes in the present value of the defined benefit obligations

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

	2018 £m	2017 £m
Opening defined benefit obligation	148	114
Net interest on scheme liabilities	3	4
Actuarial loss	6	32
Benefits paid	(3)	(2)
<b>Closing defined benefit obligation</b>	<b>154</b>	<b>148</b>

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

	2018 £m	2017 £m
Opening fair value of scheme assets	133	113
Interest income on scheme assets	3	4
Employer contributions	–	–
Actuarial gain	1	18
Benefits paid	(3)	(2)
<b>Closing fair value of scheme assets</b>	<b>134</b>	<b>133</b>

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.

## Notes to the financial statements (continued)

**26. Retirement benefit schemes (continued)****Estimated expected employer contributions over the next financial year are as follows:**

	<b>2018</b>	2017
	<b>£m</b>	£m
Contributions including deficit repair payments	<b>1</b>	1

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

	<b>2018</b>	2017
	<b>%</b>	%
Equities	35	37
Property	11	9
Fixed Interest Gilts	-	-
Index Linked Gilts	21	23
Corporate Bonds	20	20
Credit investments	12	11
Cash	1	-
Total	100	100

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

	<b>2018</b>	2017
	<b>%</b>	%
Discount rate	2.55	2.50
Future salary increases	-	-
Rate of increase of pensions in payment	3.30–3.45	3.10–3.20
Rate of increase of pensions in deferment	2.30–3.45	2.20–3.20
Retail Price Inflation	3.45	3.20
Life expectancy for a male pensioner aged 65 (in years)	21.9	21.8
Life expectancy for a male non pensioner currently aged 45 from age 65 (in years)	23.1	23.1

**Mortality assumption****2018**

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

**2017**

S1NA Year of Birth tables with CMI 2015 projections subject to minimum improvements of 1% trend for males and females

	<b>2018</b>	2017	2016	2015	2014
	<b>£m</b>	£m	£m	£m	£m
Experience adjustments on plan liabilities	(3)	1	2	2	2
Experience adjustments on plan assets	1	18	(4)	11	2

**Sensitivity analysis**

Change to	Change in assumption	Impact on DB obligation as at 31.03.18	Change in assumption	Impact on DB obligation as at 31.03.18
Discount rate	Increase by 0.5%	-9%	Decrease by 0.5%	10%
Rate of salary increase	Increase by 0.5%	-	Decrease by 0.5%	-
Rate of price inflation	Increase by 0.5%	10%	Decrease by 0.5%	-9%
Rate of mortality	Increase by 1 year	4%		

## 27. Non-controlling interests

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

<b>NDA Group</b>	<b>2018 £m</b>	2017 £m
At 1 April	<b>2</b>	2
Change in equity of non-controlling interests during year	<b>–</b>	–
<b>At 31 March</b>	<b>2</b>	2

## 28. Commitments under leases

### 28 (a) Operating leases – NDA as lessee

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018 £m</b>	2017 £m	<b>2018 £m</b>	2017 £m
Minimum lease payments under operating leases recognised as an expense in the year	<b>24</b>	19	<b>3</b>	4

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

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018 £m</b>	2017 Restated £m	<b>2018 £m</b>	2017 £m
Buildings and other:				
Not later than 1 year	<b>24</b>	24	<b>3</b>	4
Later than 1 year and not later than 5 years	<b>55</b>	60	<b>8</b>	15
Later than 5 years	<b>11</b>	15	<b>34</b>	75
	<b>90</b>	99	<b>45</b>	94

NDA Group figures for 2017 in the above table are restated for correction in respect of a small number of leases not previously included.

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 2018 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 £3 million (2017: £2 million).

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

	<b>NDA Group</b>		<b>Authority</b>	
	<b>2018 £m</b>	2017 £m	<b>2018 £m</b>	2017 £m
Buildings:				
Not later than 1 year	<b>3</b>	2	<b>5</b>	5
Later than 1 year and not later than 5 years	<b>9</b>	5	<b>17</b>	18
Later than 5 years	<b>24</b>	12	<b>70</b>	74
	<b>36</b>	19	<b>92</b>	97

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.

## Notes to the financial statements (continued)

- a. at 31 March 2018 the NDA held inventories of reprocessed uranic material. These materials are currently held at nil value, due to uncertainty over their future use, which may result in as-yet-unquantified liabilities for the NDA.
- b. whilst not the lead employer, the NDA is the lead organisation and has ultimate responsibility for certain nuclear industry pension schemes, including the Combined Nuclear Pension Plan, the Magnox section of the ESPS, and the GPS Pension Scheme. Provisions for known deficits are included within Nuclear Provisions. 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.

**29. Contingent liabilities (continued)****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 £nil (2017: £2 million) to Energy Coast West Cumbria Ltd (trading as Britain's Energy Coast), a company limited by guarantee which during the year had a director in common with the NDA. 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	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
Direct Rail Services Ltd	(36)	(28)	1	1	7	7	-	-
International Nuclear Services Ltd	(91)	(88)	-	8	185	203	-	-
NDA Properties Ltd	(39)	(35)	-	-	41	43	-	-
Pacific Nuclear Transport Ltd	-	-	2	2	-	-	-	-
Rutherford Indemnity Ltd	-	(1)	-	-	-	-	-	-
Radioactive Waste Management Ltd	(29)	(25)	1	1	-	-	-	-
NDA Archives Ltd	(4)	(2)	2	-	-	-	-	-
Sellafield Ltd	(2,011)	(1,999)	16	18	-	-	391	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 2019.

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 2019 the balance owing was £17 million (2017: £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 52 to 62.

<b>Authority</b>	<b>2018 £'000</b>	2017 £'000
Short-term employee benefits	2,693	2,078
Post-employment benefits	332	279
Other long-term benefits	868	713
	3,893	3,070

**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.
- **Office for Nuclear Regulation (ONR) notification of intention to prosecute**  
On 11 May 2018 the ONR notified Sellafield Limited of its intention to prosecute the Company in relation to an incident that occurred on 5 February 2017 and which resulted in personal contamination to one of the Company's employees. Sellafield Limited has been issued with a summons to court appearance in July 2018, and it is likely that the case will take several months to resolve.



# Business Performance

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 2017/20 Business Plan.

## 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 2017/20 NDA Business Plan and are grouped by strategic theme.

## Summary of performance 2017/18

Status description	Number of targets	%
<b>ACHIEVED</b> The key milestone or activity has been achieved during the financial year 2017/2018 or satisfactory progress is being made towards achievement of longer term milestone.	100	89
<b>MISSED TARGET</b> The key milestone or activity was due for completion before 31 March 2018 and as at that date there had been a delay against the planned schedule and the target has been missed.	9	8
<b>DEFERRED</b> Activity deferred due to re-prioritisation and/or reallocation of funding.	3	3

Updated cost and schedule information for programmes and projects at the sites can be found in Appendix C on pages 130 - 132.

More details about the performance of our Group can be found in our NDA Performance Reports which are published on our website: [www.gov.uk/nda](http://www.gov.uk/nda)

Business Performance

## Dounreay Site Restoration Ltd

Dounreay Site Restoration Limited (DSRL) manages the decommissioning of the Dounreay site as well as the operation of the Low Level Waste (LLW) disposal facility next to the licensed site. In March 2015, a revised Lifetime Plan was approved, incorporating scope that had not been agreed or finalised when the original contract was signed.

In July 2015, this scope was further updated and delivery timescales extended accordingly. Dounreay will continue to deliver within its assigned annual site funding limits, while also delivering the additional scope. However, even with the extension, is still earlier than the date for achieving pre-competition baseline for achieving interim end state.

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

### 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.

#### Progress

The majority of 2017/18 Business Plan activities have been delayed/deferred due to reprioritisation of the Dounreay materials consolidation programme. The target dates to achieve the Interim End State 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 Decommissioning Programme 2017/18 Business Plan activities

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Dounreay Materials Test Reactor (DMTR) building complex decontamination complete.	DEFERRED	This milestone will not be met this year due to funding reprioritisation.
Complete decontamination of PFR pond.	DEFERRED	Work deferred due to 'Exotics' Reprioritisation.
D1225 demolition complete.	DEFERRED	Work deferred due to 'Exotics' Reprioritisation.
<b>Nuclear Materials</b>		
Complete removal of all fuels from the DFR.	MISSED	The breeder fuel removal commissioning was delayed to replace the retrieval mast and cable management systems which were determined to be not fit for purpose. This has added over two years to the schedule.

## Business Performance

**Low Level Waste Repository Ltd**

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**

We have notified UKNWM that the third term of the contract will be awarded.

**National Low Level Waste (LLW) Programme****Programme objective**

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

**Progress**

The waste diversion programme continues to be successful, with 95% of LLW diverted away from the repository for alternative treatment and use during the year. LLWR continues to focus on development of a sustainable supply chain to support waste diversion and disposal.

Tranche 1 of the Repository Development Programme to cap and close the existing Vault 8 and adjacent trench disposal facilities has commenced design and development.

Decommissioning of the historic Plutonium Contaminated Material facilities has maintained good progress despite ongoing challenges associated with legacy wastes and delays to the availability of transport packages.

LLWR has also continued with site security enhancements following construction of a new perimeter fence and site entrance facilities.

**LLW Programme 2017/18 Business Plan activities**

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Ongoing site preparation for phased construction of the final cap for trenches 1 to 7 and Vault 8.	ACHIEVED	
Ongoing decommissioning of Plutonium Contaminated Material facilities.	ACHIEVED	Ongoing decommissioning progress has been maintained in-year despite some challenges associated with legacy wastes and unavailability of transport packages. LLWR are holding the end date and expect to recover in 2018/19.
<b>Integrated Waste Management</b>		
Continue segregated waste, treatment and disposal services in line with UK LLW Strategy.	ACHIEVED	
Support hazard reduction across the NDA estate.	ACHIEVED	
Delivery of the National LLW Programme to optimise LLW Strategy implementation. Work with consigning businesses to improve waste forecasts and inventory.	ACHIEVED	
Support hazard reduction across the NDA Group.	ACHIEVED	LLWR has continued to support hazard reduction across the Group. Progress on manufacture of new fleet of transport containers has been delayed.
Consideration of options to further optimise operations at the LLWR.	ACHIEVED	
<b>Critical Enablers</b>		
Continue to pursue overall cost savings in delivery of the Lifetime Plan.	MISSED	The Performance based incentive on efficiency has not been met within 2017/18 and LLWR have lost some fee as a result.
Continue to pursue positive business behaviours.	ACHIEVED	
Support Small and Medium Enterprise organisations by targeting overall spend with them in line with the government Growth Agenda.	ACHIEVED	

## Business Performance (continued)

**Magnox Ltd**

Magnox Ltd is responsible for the operation of 12 sites: Berkeley, Bradwell, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterston A, Oldbury, Sizewell A, Trawsfynydd, Winfrith and Wylfa.

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

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.

**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).

**Progress**

Decommissioning across all Magnox sites continues broadly to plan with continuous challenge and review of the baseline to develop efficiencies in delivery.

All 3 Low Level Waste (LLW) diversion targets set in the 2017/18 Joint Waste Management Plan have been met and legacy waste stockpiles are being reduced.

The Care and Maintenance programme, in partnership with Office for Nuclear Regulation Civil Nuclear Security, is testing security arrangements in preparation for Magnox sites entrance into Care and Maintenance, the first one being Bradwell. An asbestos management improvement plan continues to be delivered across all Magnox sites.

The Magnox Transition Programme has been set up to deliver the successor to the current Magnox PBO / SLC business model by the 1 September 2019, this being the completion date of the Magnox Termination Period.

**Magnox Decommissioning Programme 2017/18 Business Plan activities****MAGNOX LIMITED**

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continuation of estate decommissioning and demolition activities working towards Interim States.	ACHIEVED	
<b>Spent Fuels</b>		
Management of MOP9 and co-ordination of Magnox fuel management activities with Sellafield and Dounreay.	ACHIEVED	
Progression of Wylfa defueling.	ACHIEVED	Whilst in year shipments have been lower than planned, the overall programme remains within the accepted MOP strategic tolerances, supporting completion of defuelling and conclusion of reprocessing around 2020.
<b>Nuclear Materials</b>		
Delivery of the Magnox nuclear materials programme activities.	ACHIEVED	The overall programme is still within the accepted tolerance to be achieved. In year shipments have been delayed due to a lack of availability of transport packages. Measures are now in place to mitigate this impact.



## Magnox Decommissioning Programme 2017/18 Business Plan activities

### MAGNOX LIMITED contd

Target	Status	Comments
<b>Integrated Waste Management</b>		
Delivery of the Magnox elements of the Group-wide low level waste management plan.	ACHIEVED	
Progression of activities to retrieve, process and package wastes.	ACHIEVED	
<b>Critical Enablers</b>		
Support to the Government in activities to deliver the new build agenda.	ACHIEVED	
Continuation of information assurance activities and supporting processes.	ACHIEVED	
Support Small and Medium Enterprise organisations by targeting overall spend with them in line with government Growth Agenda.	ACHIEVED	
Support to NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal.	ACHIEVED	
Development of Interim End State approaches, utilising revised management arrangements.	ACHIEVED	

### BERKELEY

Target	Status	Comments
<b>Integrated Waste Management</b>		
Continuation of retrieval and packaging activities in the active waste vaults.	ACHIEVED	
Continuation of design and commissioning of shielded area waste retrieval equipment.	ACHIEVED	
Design and Build of encapsulation facility.	ACHIEVED	

### BRADWELL

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Ponds complex and contaminated structures (vaults) completed for entry into Care and Maintenance.	MISSED	Completion has been delayed due to unforeseen ground conditions. The latest forecast for completion is July 2018. This will have no impact on the care and maintenance date.
<b>Integrated Waste Management</b>		
Continue Fuel Element Debris (FED) dissolution.	ACHIEVED	
Continuation of ILW conditioning activities.	ACHIEVED	
Consign LLW FED to LLWR.	ACHIEVED	

## Business Performance (continued)

**Magnox Ltd**

<b>CHAPELCROSS</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Continuation of pond operations.	ACHIEVED	
<b>Integrated Waste Management</b>		
Preparation for ILW retrievals.	ACHIEVED	

<b>DUNGENESS A</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Ponds drained, cleaned and stabilised.	MISSED	Now forecast to complete in early 2019.
<b>Integrated Waste Management</b>		
Complete conditioning facility build.	ACHIEVED	
Begin retrievals, treatment and transport of ILW.	ACHIEVED	
Maintain contingency option of FED dissolution in support of Bradwell's entry into Care and Maintenance.	ACHIEVED	

<b>HARWELL</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continuation of Liquid Effluent Treatment Plant (LETP) area environmental restoration.	ACHIEVED	
Decommissioning and demolition activities.	ACHIEVED	
<b>Nuclear Materials</b>		
Continuation of the programme for the transfer of nuclear materials and contact-handled ILW.	ACHIEVED	The overall programme is still within the accepted tolerances to be achieved. In year shipments have been delayed due to lack of availability of transport packages. Measures are now in place to mitigate this impact.
<b>Integrated Waste Management</b>		
Recovery, processing and packaging of solid ILW.	ACHIEVED	
Continuation of ILW Store design and construction.	ACHIEVED	

<b>HINKLEY POINT A</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Begin deplant and demolition of Turbine Hall.	ACHIEVED	
<b>Integrated Waste Management</b>		
Commence Interim Storage Facility construction.	ACHIEVED	
Continuation of preparations for FED retrieval activities.	ACHIEVED	
Continuation of ILW skip management arrangements.	ACHIEVED	
Continuation of Wet Waste and Vessel consolidations.	ACHIEVED	
Commence conditioning facility construction.	ACHIEVED	

<b>HUNTERSTON A</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
<b>Integrated Waste Management</b>		
Completion of solid ILW encapsulation plant construction and mechanical and electrical installation.	MISSED	The revised schedule forecasts completion mid-2019.
Progressing of ILW retrievals, processing and storage activities.	ACHIEVED	

<b>OLDBURY</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Continue ponds decommissioning enablers.	ACHIEVED	
<b>Integrated Waste Management</b>		
Continue ILW retrieval enabling works.	ACHIEVED	
Progression of activities supporting consolidated ILW storage.	ACHIEVED	

<b>SIZEWELL A</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Continuation of ponds decommissioning.	ACHIEVED	
<b>Integrated Waste Management</b>		
Continuation of FED retrieval enablers.	ACHIEVED	
Continue ILW retrieval enabling works.	ACHIEVED	
Progression of activities to support consolidation of ILW storage.	ACHIEVED	

## Business Performance (continued)

**Magnox Ltd**

<b>TRAWSFYNYDD</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continue developing strategy for ponds End State conditions.	ACHIEVED	
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
<b>Integrated Waste Management</b>		
Begin FED retrievals and encapsulation.	ACHIEVED	
Complete sludge and resin encapsulation.	ACHIEVED	

<b>WINFRITH</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
DRAGON – continue reactor decommissioning.	ACHIEVED	
SGHWR – continue design and build of reactor decommissioning equipment.	ACHIEVED	
SGHWR – continue decommissioning of the primary and secondary containment areas.	ACHIEVED	Bulk asbestos removal and active decommissioning has taken place in the primary containment in preparation for reactor core removal. Delays due to additional asbestos and higher contamination levels are likely to extend the planned completion date.
Decommissioning and demolition activities.	ACHIEVED	

<b>WYLFA</b>		
Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Decommissioning and demolition activities in preparation for entry into Care and Maintenance.	ACHIEVED	
Provision of support and assets to nuclear new build programme.	ACHIEVED	
<b>Integrated Waste Management</b>		
Continuation of ILW retrievals and packaging.	ACHIEVED	
Continuation of waste retrieval enabling activities.	ACHIEVED	
<b>Spent Fuels</b>		
Defueling activities in line with MOP9.	ACHIEVED	

## Business Performance (continued)

**Sellafield Ltd**

On the 1 April 2016 Sellafield Limited became a wholly owned subsidiary of the NDA.

**Sellafield Priority Programmes****Priority Programme - 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.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Remove sludge from a set of wet bays.	ACHIEVED	
Continue consolidation of sludge within the pond.	ACHIEVED	
Continue with consolidation and export of contaminated metals and recovery of residual fuel for treatment and storage.	ACHIEVED	

**Priority Programme - 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.

**Major Projects within the FGMSP Programme:**

- 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.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continue export of contaminated metal wastes from wet bays.	ACHIEVED	
Continue export of material from pond to the Fuel Handling Plant.	ACHIEVED	
Continue export of sludge from pond to Sludge Packaging Plant 1 buffer.	ACHIEVED	

Business Performance (continued)

## Sellafield Ltd

### Priority Programme - Magnox Swarf Storage Silos (MSSS)

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.

#### Major Projects within the MSSS Programme

**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 in the construction phase.

**SEP Solid Waste Storage 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:** 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.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
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.	ACHIEVED	
Complete build of Silos Emptying Machine 1.	MISSED	On-site build now due to begin in Q3 of 2018/19. Delayed due to contractor performance issues.

### Priority Programme - 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.

#### Major Projects within the PFCS Programme:

- **PFCS Early 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 delivery 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 in the construction phase with civils works ongoing.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continue development of the capability to retrieve waste.	ACHIEVED	



## Business Performance (continued)

**Sellafield Ltd****Priority Programme - Sellafield Security Enhancements Programme****Programme objective**

To deliver a series of interdependent security enhancements on the Sellafield site.

**Major Projects within the SSEP Programme:**

- **Fence Civils Cluster:** 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.

Target	Status	Comments
<b>Critical Enablers</b>		
Continue the Sellafield security and resilience enhancement programme.	ACHIEVED	

**Other Major Projects at Sellafield:**

- **Separation Area Ventilation (SAV):** This project 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. The facility diverts the aerial discharges from the historic Windscale Pile 1 and First Generation Reprocessing Plant chimneys to the new SAV chimney and will enable these older facilities to be demolished. The facility is now in operational use.
- **Evaporator D:** One of the largest projects undertaken at Sellafield has been 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. This project is now complete and the facility is operational.

Target	Status	Comments
<b>Integrated Waste Management</b>		
Start use of the new Evaporator D for HAL stock management.	ACHIEVED	

- **SIXEP Contingency Plant:** 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 detailed design phase.
- **Electrical Distribution – New Construction:** Provision of new electrical distribution infrastructure to support the reprocessing and decommissioning mission at Sellafield. The Phase 1 Project will replace immediate high risk assets, replace/refurbish existing import substations and add a further import substation. The project is in detailed design phase.
- **Sellafield Product and Residue Store Retreatment Plant:** This 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 detailed design phase.

## Business Performance (continued)

**Sellafield Ltd****Other Business Plan Targets**

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Continue the decommissioning and demolition of Windscale Pile Chimney Number 1.	ACHIEVED	
Begin the demolition of First Generation Reprocessing Plant stack.	ACHIEVED	
<b>Spent Fuels</b>		
Continue to reprocess Magnox spent fuel in line with MOP9.	ACHIEVED	Progress remains within the MOP9 envelope.
Continue to receive and manage AGR spent fuel from EDF Energy.	ACHIEVED	
Reprocess oxide spent fuel through THORP from EDF Energy and overseas customers.	ACHIEVED	
Continue preparations for the long-term interim storage of AGR spent fuel following the completion of THORP reprocessing.	ACHIEVED	
<b>Nuclear Materials</b>		
Continue the safe and secure storage of plutonium in line with UK policy.	ACHIEVED	
Continue to receive and securely store special nuclear materials from Dounreay.	ACHIEVED	
Ensure safe, secure management of our uranics inventory.	ACHIEVED	
<b>Integrated Waste Management</b>		
Continue to process HAL through the Waste Vitrification Plant.	ACHIEVED	HAL has been processed through the Waste Vitrification Plant although the in-year target has been missed due to issues with operations of Vit lines. Vit line 1 has been blocked for most of the year, with lines 2 and 3 both suffering from equipment failures throughout the year. Forward plan retains overall Vit schedule completing by 2030.
Continue the programme to repatriate overseas owned vitrified waste to its country of origin.	ACHIEVED	Current issues with availability of receipt facilities in host countries have delayed in-year loading plans. Loading for the European customers is due to restart in August 2018, with uncertainty around schedule still apparent with other customers.
Continue to generate savings and preserve capacity at the LLW Repository (LLWR) by diversion of materials into the supply chain.	ACHIEVED	
Continue the programmes to receive and treat waste materials from Harwell and AWE Aldermaston.	ACHIEVED	
Continue with improvements to the site steam, electricity and water infrastructure and Analytical Services.	ACHIEVED	
Continue the Sellafield Limited transformation to support future business requirements.	ACHIEVED	Transformation is a key activity to improve efficiency and support acceleration of the mission at Sellafield. The 'Transformation Proposition' has been approved which sets out the objectives, benefits and milestones necessary to progress change.
Progress the transformation of Major Project delivery on site.	ACHIEVED	
Support Small and Medium Enterprise organisations by targeting overall spend with them in line with the government Growth Agenda.	ACHIEVED	
Continuation of information assurance activities and supporting processes.	ACHIEVED	
Complete Fellside Boiler Park to ensure reliable steam supplies to Sellafield site.	MISSED	Facility is substantially complete, with physical works completed during Q4. Issues experienced during initial running period have delayed final close-out.
Prepare the business to move out of reprocessing.	ACHIEVED	

## Business Performance (continued)

**URENCO Nuclear Stewardship Ltd**

The NDA Capenhurst site is located near Ellesmere Port in Cheshire, and was formerly home to 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 licenced site, paving the way for URENCO to invest in new facilities, in order to meet future customer demand.

As part of this transfer, URENCO established Urenco Nuclear Stewardship (UNS), formerly known as Capenhurst Nuclear Services, to provide responsible management of uranic materials and carry out remediation work on behalf of NDA. UNS 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.

NDA and UNS have also signed an agreement for the processing of UK Government-owned by-product/legacy material from uranium enrichment (known as 'Tails') through URENCO's Tails Management Facility.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Complete phase 1 of East Side Curtilage raft construction.	ACHIEVED	Following the NDA challenge earlier in the year, UNS took pro-active steps to reorganise the raft construction works.

**Springfields Fuels Ltd**

Springfields is a nuclear fuel manufacturing site and is located near Preston in Lancashire. The site is operated by Springfields Fuels Limited (SFL) and used to manufacture a range of fuel products for both UK and international customers and decommissioning 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 ongoing prior to the sale.

Target	Status	Comments
<b>Site Decommissioning and Remediation</b>		
Complete Post Operations Clean Out (POCO) of Residues Recovery Plant (RRP).	MISSED	POCO Milestone #12 was not delivered in 2017/18 and will be delivered in 2018/19. As expected, some minor elements of POCO scope have been required to be re-sequenced until the effluent treatment plant within RRP is POCO'd in April – July 2020.
Complete planning activities to support proposals to decommission the Magnox Island on site.	ACHIEVED	
<b>Nuclear Materials</b>		
Complete processing of natural uranic materials through the RRP processing.	ACHIEVED	

## Business Performance (continued)

### 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 Activities 2017-2020	2017-18 Status
Delivery of the rail transport element in support of the completion of MOP.	ACHIEVED 100% of requested services delivered in year
Support national nuclear material rail movements for Harwell, Winfrith and DSRL.	ACHIEVED 100% of requested services delivered in year
Support AGR fuel movements by rail for EDF from stations to Sellafield.	ACHIEVED 100% of requested services delivered in year
Support the discharge of NDA obligations with respect to MOD Nuclear rail transportation.	ACHIEVED 100% of requested services delivered in year
Provide value for money to the tax payer through increasing the operating profit on non-nuclear business.	ACHIEVED
Become the strategic Rail Authority for the NDA, providing support to SLC's and RWM to maximise efficiency across the estate.	ACHIEVED
Completion of the NDA Rail asset capability review, to identify further value for money opportunities within the estate.	ACHIEVED
Maintain a technology leading fleet of locomotives and wagons, with in-house maintenance capabilities at strategic locations through the successful introduction of Class 88 locomotives in 2017.	ACHIEVED, 10 Class 88 and 9 Class 68 locomotives were successfully introduced.
Attract and retain the necessary skills, capability and diversity of talent to deliver our rail logistics business in a safe, secure and reliable manner.	ACHIEVED

DRS performance as "The Best Performing Rail Freight Operator" within the rail freight industry has again been recognised with a 5th consecutive Golden Whistle Award.

### 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.

INS will continue its focus on the return of vitrified wastes to their country of origin. In addition INS will continue to provide transport services to existing international customers whilst also developing opportunities for new commercial business both internationally and in support of the UK decommissioning programme.

Key Activities 2017-2020	2017-18 Status
Continue the management of contracts with international customers for spent fuel business.	ACHIEVED
Manage uranium and plutonium services for international spent fuel business.	ACHIEVED
Transport nuclear materials including Spent Fuel, Mixed Oxide (MOX) fuel, vitrified High Level Waste (HLW) and conditioned Intermediate Level Waste (ILW) internationally and shipments of materials under the US Governments Material Management and Minimisation (M3) initiative.	ACHIEVED
Support the NDA in the development and implementation of transport solutions to enable the UK decommissioning programme.	ACHIEVED
INS continues its strategy for developing and growing new business within shipping, transport package and system design for radioactive materials, and acting as an agent for the overseas sale of UK Intellectual Property in relation to spent fuel and waste management, nuclear decommissioning and transport.	ACHIEVED

## NDA Archives Ltd

NDA Archives Ltd operates as a separate delivery organisation for the provision of archive and records management services primarily to the NDA Group. We have established a number of Service and End User Agreements and are overseeing the management of a Commercial Partner (Restore Scan Limited) who is operating a purpose-built archive facility, Nucleus, the Nuclear and Caithness Archive, in Wick.

Currently, very few of the NDA's information assets are managed to the standards required of us as a public authority. The NDA owns and is accountable for the records from across the Group and, accordingly, has developed a programme to manage them effectively from creation to destruction. The principal role of Nucleus is to consolidate and appropriately store these records ensuring that they remain secure, that their integrity stays intact (many of them will be required for 300+ years) and that they can be accessed in line with legislation and the relevant business requirements.

The facility became operational (and open to the public) on 14 February 2017 with the accessioning of both the entire Dounreay photographic collection and the Caithness Archive, the latter fulfilling a socio-economic commitment to the Dounreay community. Since then, other significant collections have also been relocated and it is expected that this aspect of the programme will continue for at least another 4 to 5 years.

Nucleus won 'Public Building of the Year' and Editor's Choice at the Architects Journal Awards (December 2017).

Key Activities 2017-2020	2017-18 Status
Open to the Public and providing Public Records Act services on behalf of both the NDA and the Highland Council.	ACHIEVED
Commence receipt of NDA-owned and Highland Council-owned records.	ACHIEVED
Complete the relocation of all ex-UKAEA archive records (DSRL and RSRL).	DEFERRED
Achieve The National Archives Place of Deposit status.	ACHIEVED
Achieve The National Archives Accreditation status.	DEFERRED - now expected 2019/20.

## 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 Activities 2017-2020	2017-18 Status
Effective management of the property within the company portfolio, meeting landlord obligations and generating an operating profit before revaluation adjustments.	ACHIEVED Operating profit of £1.2m for the year. Contract for a programme of inspection and repair of property in place.
Secure agreement to and implement the strategy for provision of high quality office accommodation to support the activities of Sellafield Limited in the Warrington area, including where appropriate vacation and disposal of existing unsuitable property and securing new leasehold property.	ACHIEVED Outline business case developed, with final decision not expected until March 2019.
Lead all property development of nuclear licensed sites in support of NDA estate requirements, including development of office accommodation in support of SLCs.	ACHIEVED No new development activity launched in 2017/18.
Act as developer for CNC Training Facility in West Cumbria, with projected completion by December 2017.	ACHIEVED Construction work completed on schedule in December 2017.
Continue the programme of disposal of property assets surplus to the requirements of the NDA mission.	ACHIEVED

## Business 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 Group.

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 Group 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 12%, notwithstanding periods of volatility, remaining within the strict risk limits and ethical guidelines imposed by the Board. Over the 5 year period of inception of the current investment strategy, a return of 29% was achieved compared to the target of 18%.

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.

Key Activities 2017-2020	2017-18 Status
Deliver target return of investments of CPI +2% over rolling 5 year time period (September anniversary of initiation of current policy)	ACHIEVED
Participation in NDA re-tender of broker contract	ACHIEVED

### Radioactive Waste Management Ltd

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 Activities 2017-2020	2017-18 Status
Support the launch of the geological disposal siting process in line with government policy.	ACHIEVED - Support to the Department of Business, Energy and Industrial Strategy and Welsh Government consultations covering: Working with Communities; and the National Policy Statement for Geological Disposal Infrastructure.
Implement government policy on geological disposal of Higher Activity Waste.	ACHIEVED - Delivery of a programme of waste packaging disposability assessments to enable safe packaging of Higher Activity Waste for the GDF
Deliver a robust technical programme to address knowledge gaps arising from RWM's design and safety assessment work, participating in appropriate European and international projects.	ACHIEVED - Development of capabilities to support GDF delivery including a restructured leadership team, an updated GDF technical programme and a new website and materials to support community engagement.
Develop Radioactive Waste Management Limited into a competent delivery organisation.	ACHIEVED - Introduction of a new Equality, Diversity and Inclusion (EDI) and Investors in People (IiP) campaign to make RWM a great place to work and ensure we get the best out of our people.
Work pro-actively with waste producers, planning for and delivering disposability assessments for their range of wastes.	ACHIEVED - Assessment of Package Record Specifications for legacy waste packages within the NDA Estate.



# Glossary

A&RAC	Audit and Risk Assurance Committee	MOP 9	Magnox Operating Plan 9
AGR	Advanced Gas-cooled Reactor	MSSS	Magnox Swarf Storage Silo
AO	Accounting Officer	NAO	National Audit Office
BEIS	Department for Business, Energy and Industrial Strategy	NDA	Nuclear Decommissioning Authority
BEP	Box Encapsulation Plant	NDAAL	NDA Archives Ltd
BEPPS DIF	Box Encapsulation Plant Production Store	NDPB	Non-Departmental Public Body
	Direct Import Facility	NED	Non Executive Director
BNFL	British Nuclear Fuels Ltd	NRW	Natural Resources Wales
BTP	British Transport Police	OBE	Order of the British Empire
C&AG	Comptroller and Auditor General	OHI	Organisational Health Index
C&M	Care and Maintenance	ONDAS	Office for the NDA SIRO
CDP	Cavendish Dounreay Partnership	ONR	Office for Nuclear Regulation
CEO	Chief Executive Officer	OSCF	Off-Site Command Facility
CETV	Cash Equivalent Transfer Value	P&PC	Projects and Programmes Committee
CFO	Chief Financial Officer	PAC	Public Accounts Committee
CFP	Cavendish Fluor Partnership	PBO	Parent Body Organisation
CIPD	Chartered Institute of Personnel and Development	PCSPS	Principal Civil Service Pension Scheme
CNC	Civil Nuclear Constabulary	PFCS	Pile Fuel Cladding Silo
CNPA	Civil Nuclear Police Authority	PFR	Prototype Fast Reactor
CNS	Civil Nuclear Security	PFSP	Pile Fuel Storage Pond
CSRP	Cyber Security and Resilience Programme	PGPC	Purge Gas Pre-Cooler
DFR	Dounreay Fast Reactor	PNTL	Pacific Nuclear Transport Ltd
DfT	Department for Transport	POCO	Post Operational Clean Out
DMTR	Dounreay Materials Test Reactor	PPP	Programme and Projects Partners
DRS	Direct Rail Services Ltd	QPR	Quarterly Performance Review
DSRL	Dounreay Site Restoration Ltd	R&D	Research and Development
EA	Environment Agency	REMCO	Remuneration Committee
EOD	Explosive Ordnance Disposal	RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
EXCO	Executive Committee	RRP	Residues Recovery Plant
FED	Fuel Element Debris	RWM	Radioactive Waste Management Ltd
FGMSP	First Generation Magnox Storage Pond	S&R	Security and Resilience
FRem	Government Financial Reporting Manual	S&SC	Safety and Security Committee
FTE	Full Time Equivalent	SAV	Separation Area Ventilation
GDF	Geological Disposal Facility	SEPA	Scottish Environment Protection Agency
HLW	High Level Waste	SFL	Springfields Fuels Ltd
HMRC	HM Revenue and Customs	SGHWR	Steam Generating Heavy Water Reactor
HSE	Health and Safety Executive	SIRO	Senior Information Risk Owner
HSL	Health and Safety Laboratory	SIXEP	Sellafield Ion Exchange Effluent Plant
IAEA	International Atomic Energy Agency	SLC	Site Licence Company
ICT	Information and Communications Technology	SLCA	Site Licence Company Agreement
IES	Interim End State	SME	Small and Medium-sized Enterprises
IFRS	International Financial Reporting Standards	SSEP	Sellafield Security Enhancement Programme
IGP	Information Governance Programme	THORP	Thermal Oxide Reprocessing Plant
iip	Investors in People	THF	Tetrahydrofuran
ILW	Intermediate Level Waste	UKGI	UK Government Investments
INES	International Nuclear and Radiological Event Scale	UKNWM	UK Nuclear Waste Management Ltd
INS	International Nuclear Services Ltd	UNS	Urenco Nuclear Stewardship Ltd
ISF	Interim Storage Facility		
LLW	Low Level Waste		
LLWR	Low Level Waste Repository Ltd		
LTIP	Long-Term Incentive Plan		
M&O	Management and Operating contract		
MBA	Master of Business Administration		
MOD	Ministry of Defence		

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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 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.

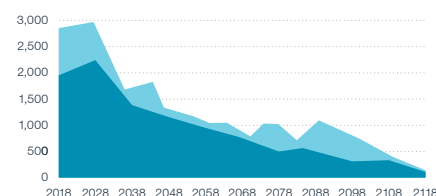
The NDA will continue to review and update the nuclear provision, and to incorporate the impact of new opportunities as they arise - for example acceleration of work on Legacy Ponds and Silos (LP&S), integrated waste management, optimised decommissioning and site restoration. Some of these opportunities 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.

### Total Expenditure Profile £m



# Appendix A - Nuclear Provision

## Uncertainty Range - Sellafield

The single point undiscounted estimate is **£91.4 billion**.

Examples of uncertainty around this figure:

- A 100% increase in major project costs post 2038 +£25.4 billion
- A 300% increase in major project costs post 2038, +£76.1 billion
- A 50% reduction in major project costs post 2038, -£12.7 billion

## Undiscounted Nuclear Provision - Sellafield

**£91.4 billion**  
(2016/17, £89.6 billion)

## Uncertainty Range - Other sites

The single point undiscounted estimate is **£29.6 billion**.

Examples of uncertainty around this figure:

- A 100% increase in Magnox final site clearance costs, +£10.2 billion
- A 3 year delay to DSRL Interim End State date, +£0.5 billion
- A 300% increase in GDF costs post 2037, +£22.8 billion
- A 50% reduction in GDF costs post 2037, -£3.8 billion

## Undiscounted Nuclear Provision - Other sites

**£29.6 billion**  
(2016/17, £29.4 billion)

## Uncertainty Range - Total

The NDA estimates the total costs associated with the undiscounted nuclear provision to be within a potential range from **£99 billion to £225 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 **£121.0 billion**.

## Undiscounted Nuclear Provision - Total

**£121.0 billion**  
(2016/17, £119.0 billion)

## Discount Rate Sensitivity

A 0.5% decrease in the discount rates over the life of the estimate would increase the provision by approximately **£69 billion** while a 0.5% increase would reduce the provision by approximately **£49 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) -2.42% ● Medium-term (6-10 years) -1.85%  
Long-term (over 10 years) -1.56%.

The application of these rates produce the overall discounted total as shown in the Authority accounts of £234.1 billion.

## Changes in Discounted Nuclear Provision

The discounted nuclear provision (Authority accounts) at the end of 2016/17 was **£164.0 billion** and movements since then have been:

The value provided for 2017/18 released from the provision, **-£3.0 billion** increases from inflation **+£5.3 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, **+£66.0 billion** and cost estimate changes which increase the obligated liability estimate by a net **+£3.1 billion**.

## Movements in Nuclear Provision 2017-18 £bn



## Discounted Nuclear Provision - Total (Authority)

**£234.1 billion**  
(2016/17, £164.0 billion)

# Appendix B -

## NDA Group – Summary of events confirmed as INES1 or higher during 2017/18

Site	Event Description	Final rating and duty holders comments on the event
<b>INES 1 events</b>		
Sellafield P4	An operator dropped a polythene bottle containing depleted Uranium Trioxide (UO <sub>3</sub> ) powder, spilling some of its contents onto the floor of a controlled area laboratory.	There was minimal spread of contamination, and no activity in air alarms after the spill. The operator was unharmed. However, the spilled quantity exceeded the limit for radioactivity specified in regulations.
Sellafield P7	Operators discovered two different types of proprietary chemical stored in an active laboratory. Both chemicals were solvents, had been in storage for some time, and had the potential to degrade into an unstable form.	At Sellafield's request, Army Explosive Ordnance Disposal attended site, and safely destroyed the chemicals. The INES1 rating reflects the safety implications of long-term storage of degraded chemicals in a facility handling radioactive materials.
Springfields Fuels Ltd P8	A corrosive reagent leaked from a plant handling uranium residues.	The quantity of uranium spilled exceeded the limit specified in regulations.
Sellafield P11	An operator posted radioactive waste from a glovebox into an unsealed bag. The waste fell through the unsealed bag onto the floor of the cell. Activity in air alarms sounded, and the operator left the cell.	The operator was not injured, and received no dose. Normal operations were quickly resumed, as significant defense in depth remained. The INES1 rating reflects procedural issues found by Sellafield's investigation.
Sellafield P12	A raw water leak occurred on an overhead pipe bridge. The water ran through the basement of a contaminated building, and carried radioactivity into the environment.	Subsequent Health Physics surveys of the area found no detectable change in radiological conditions and there were no dose implications. However, the spilled quantity exceeded the limit for radioactivity specified in regulations.

### Process notes

- It is the businesses 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 businesses concerned, reviewed all of the above. We were content that businesses had carried out a proper investigation, and learned from what had happened.
- Events are given a provisional INES rating by the businesses.
- 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

Major projects are defined as those projects with a lifetime cost of £100m or more with a business case approved by Government.

Project/Programme	Year initiated	Estimated cost at initiation (£m)	Current business case cost (£m)	Estimated cost Mar 2018 (£m)	Estimated end date at initiation	Current business case end date	Estimated end date Mar 2018
First Generation Magnox Storage Pond (FGMSP) - Bulk Sludge and Fuel Retrievals	2004	229	340	336	Dec 2012	Mar 2020	Aug 2019
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>Increases in cost and schedule were associated with the complexity of installing new equipment into an existing radioactively contaminated and sensitive nuclear facility as well as project performance issues. Cost and schedule have been stable for some time and the project forecasts to complete in 2019.</p>							
Magnox Swarf Storage Silo (MSSS) - SEP Solid Waste Storage Retrievals	-	-	880	790	-	Sept 2023	Mar 2023
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>The methodology and design have been revised over time as understanding of the installation and retrievals requirements has improved. Plans are now more realistic in engineering terms, reflecting the complexity of the final build and adequately reflecting the technical risks.</p>							
Magnox Swarf Storage Silo (MSSS) - Box Encapsulation Plant	2014	615	887	769	Jan 2021	Apr 2023	Feb 2022
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>The key reasons for the increase are around changes in scope and design along with different commercial arrangements than had been originally envisaged. Price changes on long-lead time, machinery and equipment is also a factor.</p> <p>The final business case was approved in December 2017 and will take the project through to completion. This reflects the scope changes associated with the Alternative Intermediate Level Waste Strategy.</p>							
Magnox Swarf Storage Silo (MSSS) - Silo Maintenance Facility	2006	180	255	254	Oct 2011	Aug 2019	Dec 2018
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>At the design gate firmer prices from the contractor resulted in cost and schedule estimates greater than initially anticipated. The main reasons for the increase in cost were the additional resources identified by the contractor to deliver the project and an increase in the contingency provision.</p> <p>Project completion was delayed as part of an overall portfolio reprioritisation exercise in 2014 and to align with overall MSSS requirement dates.</p> <p>Further cost increases have resulted from contractor performance issues, and inclusion of additional scope associated with the alternative waste management approach. The completion date is unchanged.</p>							



# Appendix C -

## Major Projects Cost and Schedule

Project/Programme	Year initiated	Estimated cost at initiation (£m)	Current business case cost (£m)	Estimated cost Mar 2018 (£m)	Estimated end date at initiation	Current business case end date	Estimated end date Mar 2018
Pile Fuel Cladding Silo (PFCS) - Early Retrievals Project	2005	495	601	484	Oct 2019	Apr 2021	Nov 2019
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>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.</p> <p>The revised business case, approved by Government in September 2016, provided an updated cost and schedule reflecting the new approach. The business case highlighted three key opportunities to further improve the project cost and schedule, around further simplification of the retrievals, waste handling and control equipment. Work is ongoing to realise these opportunities.</p>							
Pile Fuel Cladding Silo - Box Encapsulation Plant Product Store - Direct Import Facility	2006	119	291	291	Jan 2019	Mar 2020	Feb 2020
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>Delays to the completion of detailed design scope led to increased design and supervision costs, delaying procurements and creating inefficiency in construction activities on site. Contractor performance has been an ongoing concern and this has resulted in some forecast cost increase. Sellafield Ltd has now taken over full control of project delivery.</p>							
Evaporator D	-	-	750	749	-	Dec 2017	Dec 2017
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>Increases were a result of design and scope changes, supply chain performance issues and the constrained working environment. This project now closed out and the facility is operational.</p>							
SIXEP Contingency Plant	2014	394	500	403	Nov 2024	Nov 2026	Dec 2024
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>At initiation in April 2014 the project estimate was based on a volumetric estimate. As the project has matured through Concept (Apr 2015) and Preliminary Design (July 2016) stages the increased scope definition has enabled a more accurate and definitive estimate to be developed based on measured quantities.</p> <p>Some cost and schedule slippage has resulted from an ongoing issue with valve supply, which has required consideration of a different procurement approach. The current estimate also incorporates increased corporate knowledge, learning from other new build projects at Sellafield and benchmarking exercises.</p>							

# Appendix C -

## Major Projects Cost and Schedule

Project/Programme	Year initiated	Estimated cost at initiation (£m)	Current business case cost (£m)	Estimated cost Mar 2018 (£m)	Estimated end date at initiation	Current business case end date	Estimated end date Mar 2018
Dounreay Decommissioning Programme	2012	1,552	2,328	2,442	Jan 2025	Oct 2029	Oct 2029
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>The majority of 2017/18 Business Plan activities have been delayed or deferred to allow reprioritisation of the Dounreay 'Exotics' programme. The target dates to achieve the Interim End State 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.</p>							
National Low Level Waste (LLW) Programme	2011	1,750	1,750	1,750	Mar 2030	Mar 2030	Mar 2030
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>No change in overall LLW Programme. These will be subject to revision upon approval of the new Lifetime Plan (LTP18).</p>							
Magnox Decommissioning Programme	2014	5,537	5,551	5,551	Nov 2028	Nov 2028	Nov 2028
<p><b>Key reasons for changes to cost and/or end date from year initiated to March 2018</b></p> <p>The programme cost included in the table above has been extracted from the Lifetime Plan (LTP17) 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.</p>							

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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