

Business Plan

1 April 2020 to 31 March 2023

Cleaning up the UK's earliest nuclear sites, caring for people and the environment



Nuclear Decommissioning Authority

Business Plan

Financial year beginning April 2020 to financial year ending March 2023

Business Plan presented to Parliament pursuant to Schedule 3 of the Energy Act 2004.

Business Plan laid before Scottish Parliament by the Scottish Ministers pursuant to Schedule 3 of the Energy Act 2004.

April 2020

SG/2020/68

The health, safety and wellbeing of our employees, supply chain and communities is our number one priority. In response to the outbreak of the COVID-19 pandemic and government measures on social distancing, we have had to temporarily slow down or pause the non-essential elements of our work.

At the time of publication, national movement restrictions are still in place and it is too early to predict how the delivery of some of the activities included in this plan may be impacted because of COVID-19.

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Response to the consultation

Introduction

In December 2019 the NDA published its draft Business Plan 2020-23.

Our consultation on the Plan ran for 8 weeks, from 23 December 2019 to 14 February 2020. The Consultation was constrained to this timeframe by pre-election guidelines relating to the December 2019 general election. We are sorry if running the Consultation over the holiday period caused any issues for stakeholders responding.

Consultees were able to respond by email or by post and a contact number was provided for queries. The Consultation ran in accordance with the criteria set out in the Cabinet Office's Consultation Principles guidelines: www.gov.uk/government/ publications/consultation-principlesguidance

Our findings

We received 17 email responses before the deadline, from a range of individuals, local authorities, stakeholders groups and the supply chain. A summary of the general points raised are covered below.

We have considered the feedback and amended, where appropriate, the Plan.

If respondents feel that their feedback has not been adequately addressed, then please email: businessplanning@nda.gov.uk

Activities and requests for more information on targets

A number of respondents asked for more detailed targets to be included in the Plan. The Plan's purpose is to provide a summary of activities and expected progress for our 17 nuclear sites over the next 3 years, in line with the funding agreed with HM Treasury and the Department for Business, Energy and Industrial Strategy.

We continue to improve how we tell our story and how our mission flows into delivery on the ground. We hope that this is evident on pages 18 – 27, where we outline our 4 strategic themes, which can be broken down into 47 outcomes. Our critical enablers' page also describes the importance of these activities to our mission.

It is worth noting that good work is happening in these areas and we will share some success stories in our Annual Report and Accounts in June 2020.

Strategy 4 consultation

Our draft Strategy 2021-26 will be published for consultation in August 2020 running for 12 weeks to November 2020.

Dates for Interim End State/ Care & Maintenance at Magnox

A number of respondents asked for further detail and clarity regarding the care and maintenance dates at the Magnox sites. As explained on page 31 of the Plan, Magnox became a subsidiary of the NDA on 1 September 2019, and has a new Board and Executive Team. We have provided as much detail as we are able to, with activities and dates based on current understanding and being subject to change. The new Executive Team need time to assess the position and review the lifetime plan, which will provide a much clearer picture.

Funding

A number of respondents asked for a more detailed split in expenditure. The intent of including expenditure figures is to outline planned allocations of available funding. NDA operates a portfolio funding approach across the group and retains flexibility in final allocations through the year. This allows us to focus on our highest hazards and high risk areas, while maximising value for money. This means that it is not

always appropriate to provide a more detailed split of the expenditure.

Sustainability/Net-Zero

A number of respondents were interested in how the NDA would support the target to reduce greenhouse gas emissions to net-zero by 2050. We have updated the plan to show that supporting the UK's net-zero greenhouse gas emissions commitment is a priority area for the NDA. This year we will be developing a roadmap to define our plans to embed sustainability across the NDA group.

Socio Economic activities

There was continued interest in the NDA's work in this area and how it allocates budget for these activities. The NDA has a revised socio-economic strategy, which was out for consultation until 13 March 2020. This will introduce a new online grant application process from April 2020, to be used by NDA, Sellafield, LLWR and Magnox, before being rolled out to the rest of the NDA group. There is revised guidance on how to apply for grants, which will be available from April 2020. Finally, all spending on socio-economics across the group is now published annually. We would encourage you to review the draft socio-economic strategy and feedback is welcome. www.gov.uk/government/

consultations/nda-local-economic-andsocial-impact-strategy-2020-to-2026draft-for-consultation

Other minor changes in the Plan

- Further clarity added to the funding page on Spending Review.
- On the critical enablers page we have included 'working in partnership with local authorities and organisations to better understand local needs.'
- On the site progress tables we have changed 'defueled' to 'free from spent fuel'.

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Preface

We're charged with the mission to clean up the UK's earliest nuclear sites safely, securely and cost-effectively. Doing this with care for our people, communities and the environment is at the heart of our work. We're committed to overcoming the challenges of nuclear clean-up and decommissioning, leaving our 17 sites safe and ready for their next use.

Engaging openly and transparently on our work is important to us. We create and consult on a wide range of publications every year, including the annual Business Plan. This plan sets out the activities that need to take place to advance

our important clean-up and decommissioning work and operate our facilities safely and securely over the next 3 years. It also highlights some of the other essential work to enable us to carry out our mission-critical activities.

As well as describing the key activities over the next 3 years, our plan also sets out our expected income and expenditure for the next financial year.



NDA STRATEGY

Describes how we will deliver our mission, ensuring that the UK's Nuclear legacy sites are decommissioned and cleaned up safely, securely, cost-effectively and in ways to protect people and the environment.

Energy Act requirement

Period covered: 100+ years Published: every 5 years Public consultation: 12 weeks Last published: April 2016

NDA MISSION PROGRESS

Provides our stakeholders with a clear, concise and simple story of NDA mission progress since 2005, that demonstrates delivery of our strategic themes and outcomes as explained in the NDA Strategy 2016.

Period covered: 100+ years
Published: every 5 years
Last published: July 2019

NDA BUSINESS PLAN

Describes key activities across the group over the next 3 years that align to our strategic outcomes and details the funding available for next year

Energy Act requirement

Period covered: 1 year (outlines 3 years of expected activities)

Published: every year

Public consultation: 8 weeks

MID-YEAR PERFORMANCE REPORT

Provides a progress update against Business Plan activities and incorporates the NDA group key targets.

Period covered: 6 months

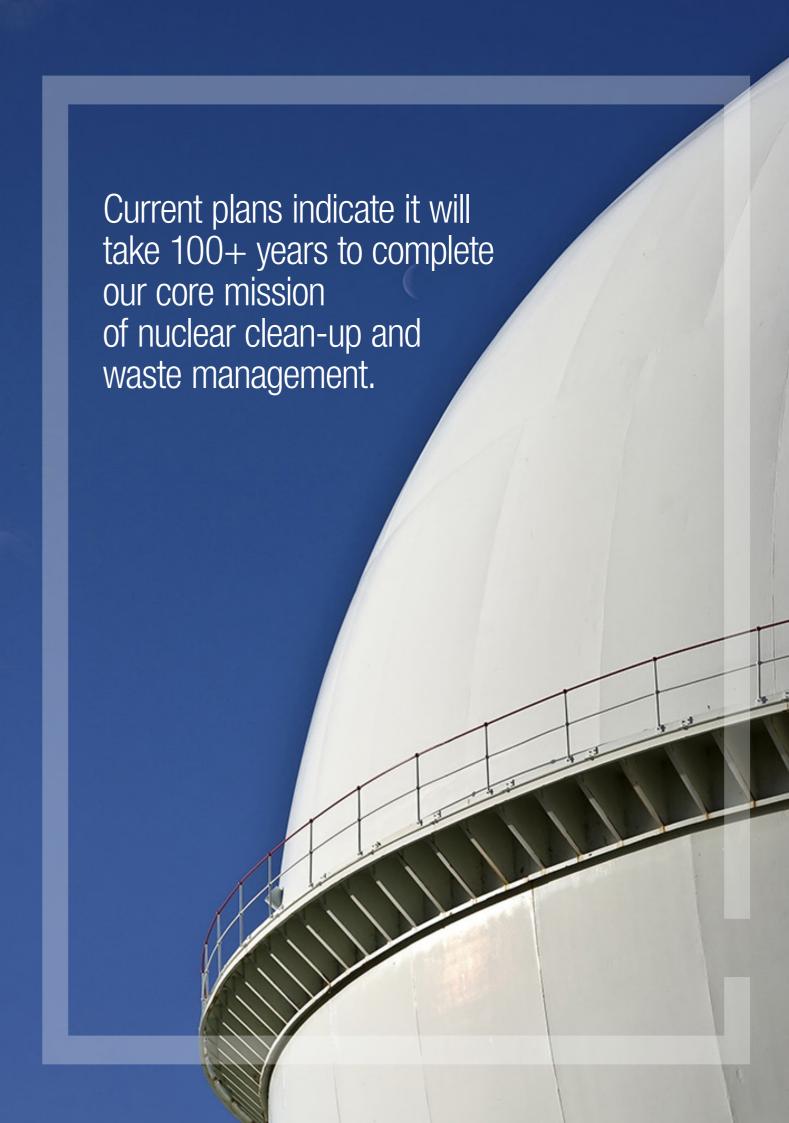
Published: every year

ANNUAL REPORT AND ACCOUNTS

Describes achievements and spending. Reports against Business Plan activities and contains an overall progress update against our mission.

Energy Act requirement

Period covered: 1 year Published: every year



A message from our Chief Executive David Peattie

In my statement last year I talked about the momentum building in the NDA after a challenging period. That momentum continues and this year has been one of notable improvement and success across our nuclear sites and businesses.

Strategically, we've strengthened the capability of the NDA, improved the way the NDA group is organised, and made solid progress in our determination to develop the NDA group as a great place to work for everyone. Significantly, we've seen notable achievements in our work to clean up and decommission our sites.

We've established a firm foundation on which to build success in the longer term. The next few years will see us seeking to reap the benefits of the organisational and cultural improvements and the renewed stability in the NDA group.

2019/20 overview

We entered the year introducing One NDA across the NDA group. One NDA is about working together more effectively and efficiently as a group, capitalising on its wealth of experience and talent, harnessing the opportunities that come from our scale and breadth.

Embedding One NDA is strategically important and we've continued to make solid progress in our plans. In September 2019, we successfully transitioned the Magnox business into an NDA subsidiary, led by Chair Lawrie Haynes and CEO Gwen Parry-Jones OBE. Both bring a

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"We've strengthened the capability of the NDA, improved the way the NDA group is organised, and made solid progress in our determination to develop the NDA group as a great place to work for everyone."

An important milestone was reached at Dounreay when half the remaining radioactive fuel elements were removed from the 60-year-old Dounreay Fast Reactor.

At our Low Level Waste Repository, the workforce celebrated diverting 11,000 containers from disposal at the site, eliminating the need for a second repository and saving up to £2 billion for the taxpayer.

Looking forward

Safety will of course continue to be our number one priority and built into everything we do. As well as placing safety at the heart of our site operations, we'll also be continuing our important work to promote mental health and wellbeing across the NDA group.

We will also be embedding sustainability into our work and doing our part to support the UK's net-zero greenhouse gas emissions target.

Government's one year spending

round, setting out its spending plans for 2020/21, underlines the commitment to our nationally important work. Agreed funding levels account for our planned increase in decommissioning activity and associated spend, as well as the expected reduction in commercial revenue.

In the next 3 years, we'll see some notable milestones being achieved in our mission. Sellafield's long history of nuclear fuel reprocessing will come to an end with the closure of the Magnox Reprocessing Plant in 2020, moving the site's focus to decommissioning.

Our waste optimisation and the ambitions of our Radioactive Waste

Strategy will continue to be important. So too will the work by Radioactive Waste Management to identify a suitable site and willing community for a geological disposal facility, internationally recognised as the safest long-term storage solution for nuclear waste.

In 2021 we will be publishing the next iteration of the NDA Strategy, setting out our approach to delivering our mission. Our Strategy is always informed by stakeholder views and consulting with the public will be a key focus for us in the next year.

People development

There'll be some significant appointments made across the NDA group in the period covered by this Business Plan. In the NDA we'll welcome a new Chair, following Tom Smith's decision not to seek a further term. Tom will step down from the role of Chair in August 2020, after 3 years in post and 7 years in total on the NDA Board. I'd like to offer my sincere thanks for his significant contribution to the mission.

Meanwhile at Sellafield, Martin Chown was appointed as the new CEO in February after Paul Foster stepped down to pursue new challenges. Paul led a period of unrivalled progress, for which I'm immensely grateful. I look forward to working with Martin to continue the clean-up and decommissioning of the site.

We've taken significant steps to shift our workplace culture and we're now starting to see the importance of diversity being understood across our entire group. My goal is clear, to create great places to work for everyone, and that means encouraging inclusion and diversity at every level.

I'm passionate about increasing diversity in our sector, including supporting the government's Nuclear Sector Deal's ambition for 40% women in nuclear by 2030. This year I had the privilege of being asked to become the new patron for Women in Nuclear UK and help with its important work in this area.

Our stakeholders

Building and maintaining the trust of our stakeholders remains an enduring priority. I'm grateful for the support of our stakeholders, who continue to challenge and influence the decisions we take. The last couple of years have been ones of unrivalled scrutiny, following the legal judgment on the Magnox contract. We've responded to a range of external analysis and recommendations, and while there may be additional learning to come from the Magnox Inquiry and Tailored Review, I'm confident in the steps we've taken to strengthen and improve our capacity and capability.

Thanks

I'd like to end by thanking all my colleagues. Although a lot's changed since the creation of the NDA 15 years ago, the commitment of the UK nuclear decommissioning workforce is unwavering. Every day thousands of people are involved in keeping our sites safe and cleaning them up for their next use.

Whether immersed in front-line decommissioning or playing a vital support role, our employees are our greatest asset and one of the most skilled workforces in the world.

David Peattie

NDA Chief Executive



The NDA

We lead the nuclear clean-up and decommissioning mission on behalf of government and develop the strategy for how it should be carried out.

We evolve our strategy every 5 years and are now working on our fourth strategy, which we'll publish in 2021.

We strive to deliver best value for the UK taxpayer by focusing on reducing the highest hazards and risks, while ensuring safe, secure and environmentally responsible operations at our sites.

We seek ways to reduce the level of public funding from government by generating revenue from commercial activities.

As owners of one of the largest nuclear decommissioning and remediation programmes in Europe, our main priority is to lead the work across the NDA group. We also play an important role in supporting government's aspiration for the UK to be a global leader in the civil nuclear sector.

How we're set up

We're a non-departmental public body created by the Energy Act 2004 to lead the clean-up and decommissioning work at our 17 sites on behalf of government.

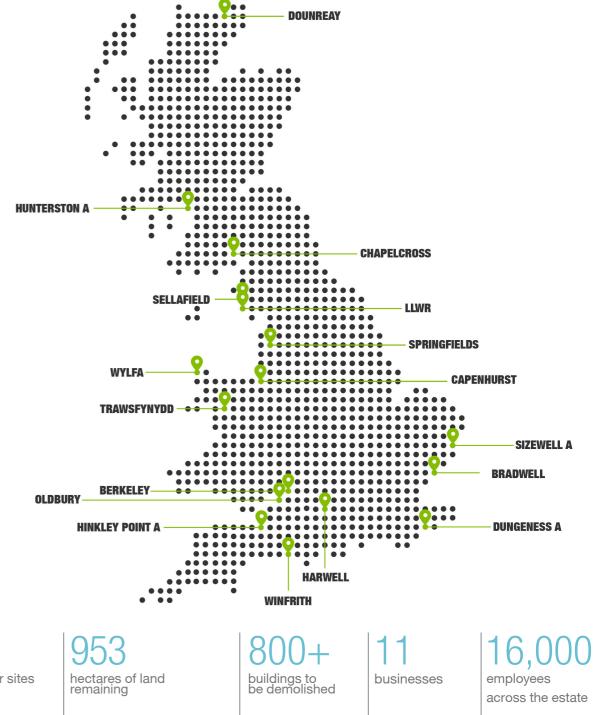
We're sponsored and funded by the Department of Business, Energy and Industrial Strategy (BEIS). Our plans for cleaning up the sites are approved by BEIS and Scottish Ministers, who provide a framework for us.

We have 5 offices across the UK, in Cumbria, Dounreay, Harwell, Warrington and London, and employ 262 permanent staff.

Our Sites

The UK's nuclear landscape began to take shape in the post-war period and has evolved over many decades. Our 17 sites reflect this and include the first fleet of nuclear power stations, research centres, fuel-related facilities and Sellafield, which has the largest

radioactive inventory and the most complex facilities to decommission. Current plans indicate it will take more than 100 years to complete our core mission of nuclear clean-up and waste management. The ultimate goal is to achieve the end state at all sites by 2135.



nuclear sites

The NDA group

We don't deliver our mission alone. Accomplishing this important work requires the best efforts of the entire NDA group and its 16,000 employees.

The businesses charged with running our sites are called site licence companies. We have 4 site licence companies. Sellafield and Magnox are subsidiaries of the NDA, while Dounreay Site Restoration and Low Level Waste Repository are managed by parent body organsiations with which we have a contract.

Springfields and Capenhurst are also managed by private sector organisations with which we have decommissioning contracts and other commercial arrangements.

We have a number of other subsidiaries, which are responsible for delivering crucial support and enabling activities. Direct Rail Services and International Nuclear Services look after our unique transport requirements, and are amongst the most experienced nuclear transport organisations in the world. Meanwhile, Radioactive Waste Management is responsible for the mission to deliver a Geological Disposal Facility. Our other subsidiaries

include Rutherford Indemnity, NDA Archives, NDA Properties and Energus.



One NDA

When David Peattie joined the NDA as Chief Executive in 2017, he commissioned an assessment of how to take the NDA group forward to find more effective and efficient ways to provide nuclear clean-up and decommissioning.

In April 2019, we launched One NDA. The One NDA way of working is firmly based on maximising the opportunities that come from working more effectively and efficiently as a group of businesses.

The benefits we're striving to achieve from One NDA are:



• Increased value for money for the taxpayer



• Enhanced performance and delivery of outcomes



Strong organisational health



Improved stakeholder confidence and trust



• Improved culture for our people

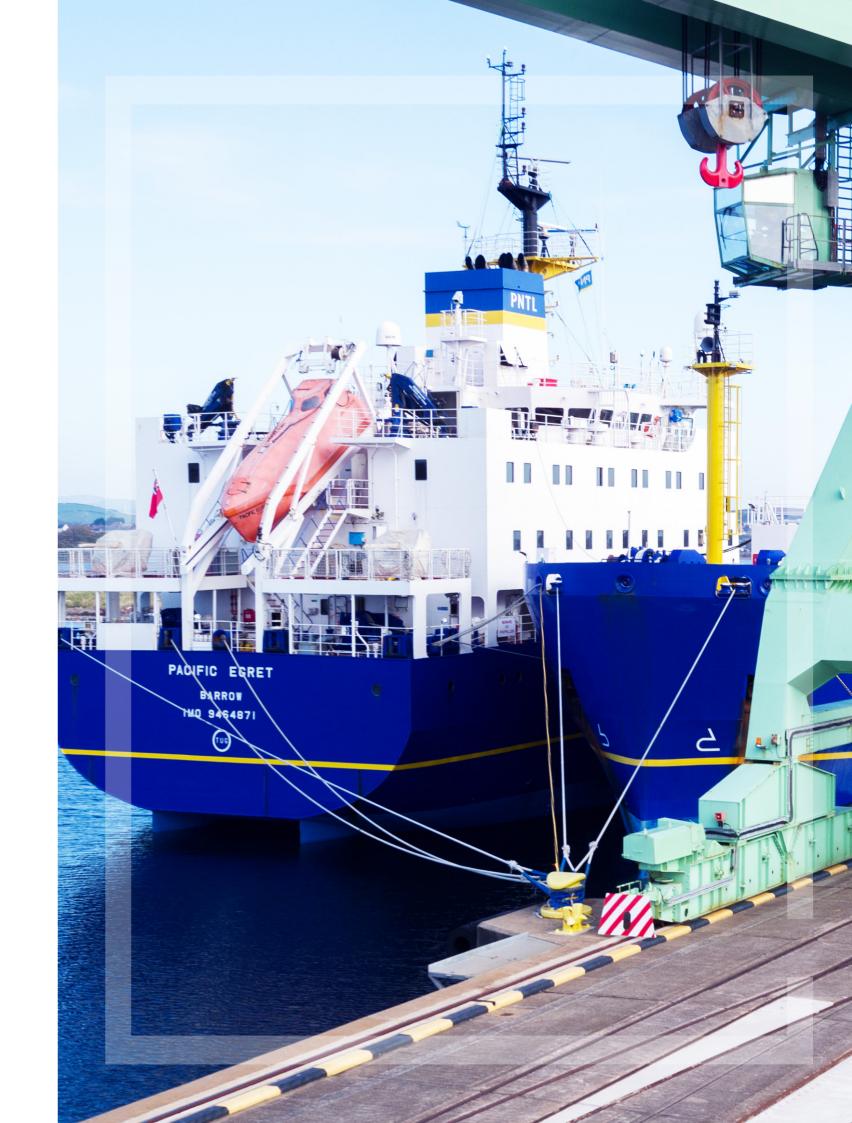
Our Vision

As well as our shared mission across the NDA group, One NDA has enabled us to develop a unified vision to reflect the changing nature of the NDA group and the opportunities that brings to:

> Deliver our mission together safely, securely and more creatively, transparently and efficiently

Create great places to work and taking pride in what we do

Trusted to do more in the UK and globally



Our strategic themes

We use 4 themes to describe the different types of clean-up and decommissioning activity: spent fuels, nuclear materials, integrated waste management and site decommissioning and remediation.

Spent fuels

We manage 3 types of spent fuels: magnox, oxide and exotic. Spent fuel is removed from a reactor for temporary storage in a pond or dry store, until it can be transported to our Sellafield site. Our strategy is to end reprocessing on that site in 2020, after which all remaining spent fuel will be safely stored until we have a permanent solution for disposal.





Nuclear materials

We have 2 types of nuclear materials on our sites: uranics and plutonium. These materials are by-products from either manufacturing or reprocessing. All nuclear materials must be managed safely and securely by being converted into new fuel or being immobilised and stored until a permanent UK disposal facility is available.

Integrated waste management

Managing the large quantities of radioactive waste from operating and decommissioning our sites is one of our biggest challenges. Some of this waste is in an untreated form and some has been treated and is being stored in the interim. In the case of low-level waste, some has been disposed of. Retrieving, treating and interim-storing the radioactive waste from Sellafield's legacy ponds and silos is our highest priority.



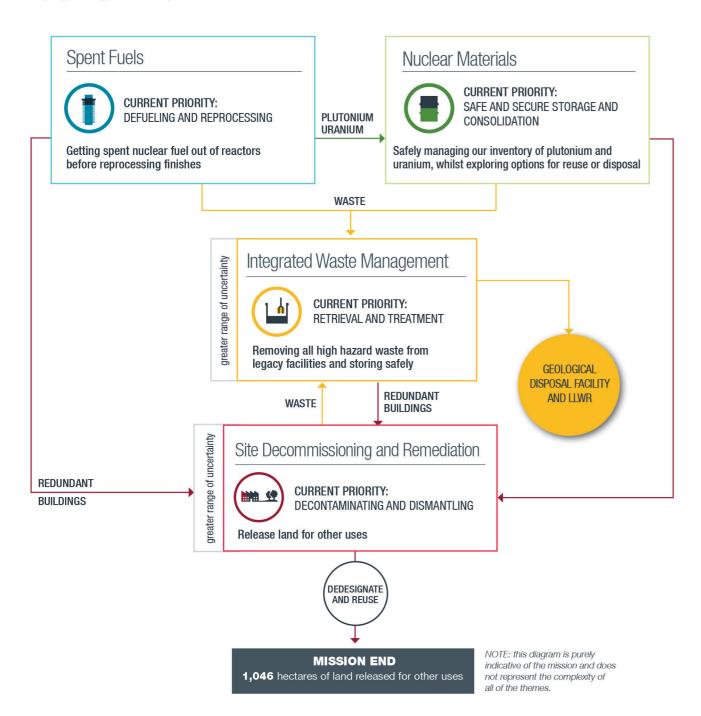
Site decommissioning and remediation

After the buildings on our sites have been decommissioned, decontaminated and dismantled, the land will be cleaned up so it can be released for other uses. We're assessing alternative final stages of decommissioning that may lead to earlier release of land, continued employment and simpler regulatory controls.

Our strategic themes (continued)

Our 4 strategic themes enable us to define and prioritise our work, and are all closely linked.

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



Our strategic outcomes

Our mission can be further broken down into 47 outcomes, across the 4 strategic themes. We call these strategic outcomes.

So far, 4 of our strategic outcomes have been achieved and good progress is being made with the safe management of nuclear inventory and reduction of its risks.

More strategic outcomes will be achieved with the closure of the reprocessing facilities and the building of new modern treatment 20 years, out to 2040. and storage facilities to manage

nuclear material and waste. We're ultimately working towards the final disposal of nuclear inventory and the release of land for other economic uses.

The diagrams on pages 22-25 show which of the outcomes we've already achieved and those we're striving to deliver in the next All of the activities detailed in the back of this Plan contribute to the delivery of these strategic outcomes.

For more detail on how we're doing against all our strategic outcomes, please see our Mission Progress Report on our website:

www.gov.uk/nda



DELIVERY OF OUR MISSION OVER THE NEXT 20 YEARS, UP TO 2040 - Spent Fuels and Nuclear Materials

STRATEGIC OUTCOMES 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2039 2038 Spent Fuels SPENT MAGNOX FUEL 1 All sites defueled - ACHIEVED 2 All legacy fuel retrieved 3 Magnox fuel reprocessing completed Reprocessing complete 4 All remaining Magnox fuel in interim storage 5 All remaining Magnox fuel disposed SPENT OXIDE FUEL 6 All EDFE Oxide fuel received All legacy fuel retrieved - ACHIEVED All Oxide fuel reprocessing completed - ACHIEVED All remaining Oxide fuel in interim storage Last EDF fuel receipt 10 All remaining Oxide fuel disposed SPENT EXOTIC FUEL 11) All Exotic fuel defueled 12 All Exotic fuel consolidated 13 All Exotic fuel reprocessing completed 4 All remaining Exotic fuel in interim storage 15 All remaining Exotic fuel disposed **Nuclear Materials PLUTONIUM KEY** 16 All Plutonium produced Strategic Outcome already completed All Plutonium consolidated - ACHIEVED 18 All Plutonium repacked Significant milestone 19 All Plutonium in interim storage 20 All Plutonium reused or disposed → Strategic Outcome will be achieved post 2040 URANICS 21 All Uranium produced 22 All Uranium consolidated All Uranium treated 24 All Uranium in interim storage 25 All Uranium reused or disposed

All data above and in the subsequent pages, represent the latest information and are subject to change

DELIVERY OF OUR MISSION OVER THE NEXT 20 YEARS, UP TO 2040 - Integrated Waste Management and Site Decommissioning and Remediation

STRATEGIC OUTCOMES 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2039 Integrated Waste Management LOW LEVEL WASTE 26 All LLW produced 27 All LLW diversion completed 28 All LLW disposed 29 All VLLW disposed INTERMEDIATE LEVEL WASTE 30 All ILW produced SELLAFIELD SELLAFIELD: PFSP+FGMSP: Bulk sludge retrieved PFCS+MSSS: First retrievals 31 All legacy waste retrieved SELLAFIELD: PFCS: Start bulk retrievals SELLAFIELD: MSSS: Start bulk retrievals All ILW treated 33 All ILW in interim storage **34** All ILW disposed HIGH LEVEL WASTE 35 All HLW produced 36 All HLW treated 37 All HLW in interim storage 38 All overseas HLW exported GDF: Recommendation of sites 39 All HLW disposed GDF: Site Characterisation Complete GDF: Development Phase commences to government GDF: Borehole investigations GDF: Construction commences Site Decommissioning and Remediation **NEW BUILD** 40 All planned new buildings operational 41 All buildings primary function completed DECOMMISSION AND DEMOLISH 42 All buildings decommissioned 43 All buildings demolished or reused DOUNREAY: Fast reactor dismantled DOUNREAY: Prototype Fast reactor dismantled LLWR: PCM demolition DOUNREAY: Shaft and Silo encap complete DEDESIGNATE OR REUSE DOUNREAY: interim end state achieved 44 All sites in interim state 45 All sites mission completed 46 All contaminated land remediated 47 All land dedesignated or reused

Critical enablers

Some of the work we do, we describe as 'critical enablers'. Critical enablers cover the important activities needed to support the overall delivery of our mission. You can read more about our critical enabler activities over the next 3 years on pages 35 to 64. Some of our most important critical enablers include:



Socio-economics

We have a responsibility to support the sustainability of our sites' communities, up to and after their closure.

The NDA group's socio-economic strategy is built upon supporting sustainable incomes, resilient economies and thriving communities.

Our approach is to work locally. This means working in partnership with local authorities and organisations to better understand local needs.



Supply Chain

A diverse, ethical, innovative and resilient supply chain is essential to delivering the NDA mission and provides value for money for the UK taxpayer.

Our strategies are aligned to business operations, informed by excellent market insight and recognise that value comes in many forms, such as an improved environment, reduced hazard, social amenities, cost savings and employment opportunities.



Public and Stakeholder Engagement

Engaging openly and transparently with all our stakeholders is crucial to building the support, confidence and trust we need to deliver our mission.



Research and Development

Delivering our mission needs many 'never-done-before' solutions, which require significant innovation and novel engineering approaches. Our strategy is to solve the challenging technical problems safely, whilst aiming to be more effective, efficient and wherever possible for less cost to the taxpayer.

Research and development is essential to decommissioning our sites and delivered in partnership with our supply chain.

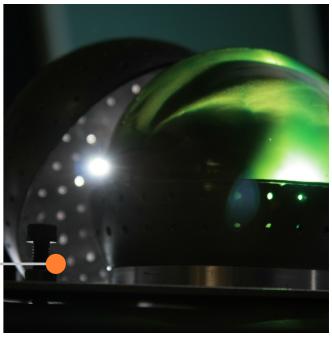
Developing innovative ways to overcome our challenges will see us focus on areas such as remote and robotic technologies in the coming years and take advantage of innovation in other sectors such as space, oil and gas.



Skills

Our mission needs a diverse range of individuals and organisations to provide the capability and capacity to deliver effectively, so having the rights skills at the right time within the NDA group and our supply chain is a priority.

Our strategy on skills is three-fold: attracting the right calibre of people, developing future skills, and developing our existing talent.



Health, Safety, Environment and Wellbeing

Safety is and always will be our number one priority. Our focus is to reduce the highest hazards and risks, while ensuring safe, secure and environmentally responsible operations at our sites. It's our duty to carry out this highly complex mission safely, efficiently, ensuring people and the environment are safeguarded at all times.

Our mission is one of environmental remediation. We will apply the principles of sustainability to ensure that our mission outcomes and the journey to deliver them balance environmental, economic and social impacts.

2020-2023 highlights

On pages 35 to 64, you'll find all the main activities over the next three years for the NDA group. Some highlights include:

Spent fuels

After a long and proud history of reprocessing nuclear fuel, Sellafield will complete the last of its reprocessing operations in 2020. The end of reprocessing at the Magnox Reprocessing Plant follows the planned conclusion of operations at THORP in 2018 and will see the site's sole focus on clean-up and decommissioning.

Integrated waste management

Landmark progress will be made at 4 of our highest hazard facilities over the next 3 years. Removing the inventory at Sellafield's Pile Fuel Cladding Silo, Magnox Swarf Storage Silo, Pile Fuel Storage Pond and the First Generation Magnox Storage Pond are amongst the NDA and Sellafield's highest priorities.

After years of painstaking preparations on the 60-year-old facilities and complex engineering solutions, work will begin in 2020 to retrieve waste from the 2 silos and bulk sludge from the site's 2 ponds.

Nuclear materials

After successfully completing the transfer of all separated plutonium from Dounreay to Sellafield, our strategy is to repackage the plutonium for long-term safe storage. Over the next few years, Sellafield will be focused on building its new facility to carry out the necessary repackaging work.

Site decommissioning and remediation

LLWR's Plutonium Contaminated Materials (PCM) Decommissioning Programme was completed in 2019, almost 4 years ahead of originally scheduled, saving around £20 million. Five decommissioned concrete bunkers which housed legacy PCM, will be demolished and material re-used as in-fill for the final engineered cap over vaults and trenches.

Critical enablers

Our transport experts DRS and INS will continue to work in partnership, sharing the knowledge and expert nuclear logistics capabilities of both organisations.

RWM will work in partnership with communities to evaluate potential sites for a GDF. These evaluations will include design studies for specific sites, initial safety analyses, and environmental and economic impact assessments to help establish whether sites could be suitable.

As well as being compliant with laws, regulations, policies and procedures, displaying the right values and behaviours is critically important. The next 3 years will see us striving to achieve the outcomes of the NDA group Equality, Diversity and Inclusion strategy, launched in 2018.

Government has made a commitment to achieve netzero greenhouse gas emissions for the UK by 2050. This is a government priority and we will be mapping our carbon footprint and developing our road map to support this target.

After a long and proud history of reprocessing nuclear fuel, Sellafield will complete the last of its reprocessing operations in 2020.



We are publicly funded through the Department for Business, Energy and Industrial Strategy. Our total planned expenditure is voted upon annually by Parliament in line with the Spending Review

Our Funding

Funding framework

Government has shown continued support for the NDA mission with increased grant funding offsetting the decline in commercial revenue following the close out of THORP reprocessing contracts in 2018. Spending review 2019 only sets the funding for 2020/21. Funding for the years 2021/22 onwards will be determined by government in the anticipated multi-year spending review in 2020.

Commercial income

We maximise revenue from our existing assets and operations to help fund decommissioning and clean-up, in order to reduce the level of public funding needed to meet the scope of our plans and delivery of the NDA mission.

Our commercial operations are primarily spent fuel and nuclear materials management with

additional opportunities identified in providing transportation services. We will pursue all commercial opportunities using our existing assets, operations and people where they do not materially impact on our core mission or increase our liabilities.

Prioritisation and allocation of funding

Within affordability constraints, we will seek to maintain progress and maximise value for money through the effective implementation of our strategy. This means focusing on reducing our highest hazards and risks, whilst ensuring that safe, secure and environmentally responsible site operations are maintained.

Planned income and expenditure in 2020/21

This Business Plan sets out our anticipated income and expenditure for 2020/21, as agreed with Treasury and the Department for Business, Energy and Industrial Strategy (BEIS).

Our total planned expenditure for 2020/21 is £3.391 billion, of which £2.785 billion will be funded by UK Government and £0.606 billion by income from commercial operations.

Planned expenditure on site programmes will be £3.140 billion, while non-site expenditure is expected to be £0.251 billion.

This non-site expenditure includes skills development, socio-economic, research and development, insurance and pension costs, fees to businesses, implementing geological disposal and the NDA operating costs as detailed on page 33.

£3.391bn Total planned

expenditure 2020/2021

£2.785bn

Funded by UK government

£3.140bn

Planned site expenditure

£251m

Planned non-site expenditure

Our funding

Planned income and expenditure summary 2020/21

£M Businesses/Sites	Decom & Clean-up Costs (A)	Total Operations Costs: Running Cost (B)	Total Operations Costs: Capex (C)	2020/21 Plan Total (A+B+C)	2019/20 Plan Total
Sellafield Ltd	1,139	643	368	2,150	2,000
Trading and Gas Costs (Sellafield)	28			28	23
Magnox Ltd	515			515	475
Dounreay Site Restoration Ltd	200			200	185
LLWR Ltd	82			82	68
Springfields Fuels Ltd	18			18	20
Capenhurst	55			55	41
Nuclear Transport and Contract Management		92		92	89
Non-Site Expenditure	251			251	211
TOTAL	2,288	735	368	3,391	3,112
Income				606	902
Net (grant funded)				2,785	2,210

Notes:

- 1. Numbers may not cast due to rounding
- 2. Final Annual Site Funding Limits issued in March 2020 may be adjusted to reflect efficiency, performance and portfolio pressures.
- 3. The NDA reserves the right to reallocate funding to meet prioritised programme needs.

Summary of NDA funding 2020/21 onward

Summary of NDA funding	2020/21 £M	2021/22 £M	2022/23 £M
Income	606	TBC - will be confirmed in next spending review	
Government Funding	2,785		
Expenditure	3,391		
Balance	-		

Our funding

2020/21 breakdown of non-site expenditure

Non-site expenditure	2020/21 Plan £M	2019/20 Plan £M
NDA operating costs (1)	65	51
Radioactive Waste Management Limited	63	34
Socio-economic, skills, research and development, knowledge management, other	43	31
Estate Insurance	15	17
NDA Properties, policy support, NDA asset decommissioning	50	28
Contractor fees	15	51
Total	251	211

Notes:

2020/21 breakdown of planned income by category

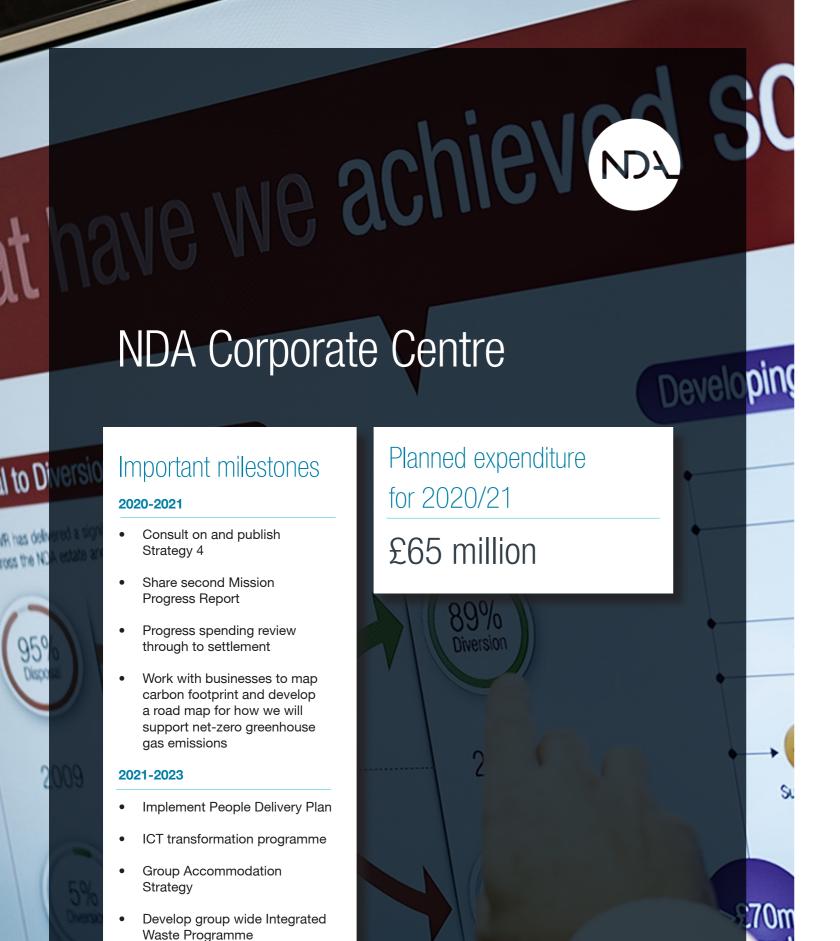
Income source	2020/21 Plan £M	2019/20 Plan £M
Reprocessing and fuel management services	470	802
Electricity generation	-	-
NDA - INS transport	90	64
Intra site services	46	35
Total	606	902

^{1.} Increase in NDA operating costs resulting from transfer of INS commercial staff to the NDA and capability improvement resulting from Magnox Inquiry and development of One NDA.



NDA group key activities

The NDA group's key activities for the next 3 years are set out on the following pages. All activities and dates shown in the subsequent pages represent the latest emerging information and are subject to change



Key Activities	Timescale
Spent Fuels	
Manage special nuclear materials consolidation in agreed locations	2020-2023
Nuclear Materials	
Work with government to develop a long-term management solution for separated plutonium in the UK	2020-2023
Integrated Waste Management	
Work with group businesses to explore alternative disposal options for Higher Activity Waste	2020-2023
Develop a group-wide integrated waste programme to secure significant change to radioactive waste management programmes across the NDA group	2020-2023
Critical Enablers	
Publish a revised NDA Strategy	2020-2021
Progress spending review through to settlement	2020-2021
Implement accepted recommendations from the Magnox Inquiry and Tailored Review	2020-2021
Provide support to government on nuclear new build decommissioning plans	2020-2023
Lead the strategic agenda across the NDA group on equality, diversity and inclusion (ED&I), ensuring effective governance and provide oversight on the creation of implementation plans to achieve ED&I targets	2020-2023
Embed the key tenets of the Industrial Strategy, including active participation in the Nuclear Sector Deal to help achieve HMG deliverables	2020-2023
Support implementation of forthcoming new nuclear emergency preparedness standards across the NDA group, as part of the UK's implementation of the Basic Safety Standards Directive 2013	2020-2023
International support, sharing knowledge and expertise in decommissioning and clean-up activities	2020-2023
Implement the group Socio-Economic Strategy outlining opportunities for the wider economy	2020-2023
Develop strategic opportunities that optimise delivery of the mission	2020-2023
Enable the group to proactively deter, detect, defend against, recover from and be resilient to both current and evolving cyber threats	2020-2023
Support small and medium enterprise organisations by increasing overall spend with them in line with the government growth agenda	2020-2023
Implement our strategic people delivery plan to enable resource planning, skills development and flexibility and mobility across the group	2020-2023
Lead in the area of Mental Health and Wellbeing across the NDA group and further enhance the wellbeing community across the group	2020-2023
Implement new ICT infrastructure, software and working practices to allow smarter, flexible working across the NDA	2020-2023
Implement government led reforms of public sector pensions and exit caps across the NDA group	2020-2023
Develop a group-wide accommodation strategy (including welfare, warehousing, transport and logistics) allowing effective re-use of the operational land for construction of new facilities required to deliver the NDA mission and support UK Industrial Strategy	2020-2023
Work with group businesses to map the carbon footprint and develop a road map for how we will support government's commitment to net-zero greenhouse gas emissions for the UK by 2050	2020/2021
Continue collaboration with the NDA group and BEIS to further develop targeted opportunities for the delivery and effective re-use of our land and infrastructure in support of the NDA mission and wider UK Industrial Strategy	2020-2023
Regulatory Control	
Contribute to sustainability performance and meet government objectives and targets	2020-2023
Continue working with regulators and government to determine institutional controls appropriate to restoration of nuclear sites	2020-2023



Important milestones

2020-2021

- Begin retrievals from the Pile Fuel Cladding Silo and Magnox Swarf Storage Silos
- Complete Magnox reprocessing

2021-2022

- Continue with improvements to the site utilities infrastructure including new Steam Generating Plant
- Commence bulk retrievals from Magnox Swarf Storage Silo

2023-2025

- Bulk sludge retrievals from Pile Fuel Storage Pond
- Bulk retrievals started from the Pile Fuel Cladding Silo
- Bulk sludge retrievals from First Generation Magnox Storage Pond

Planned expenditure for 2020/21

£2.15 billion

Site in Cumbria

265 hectares

Hectares de-designated

0 hectares

All 265 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

All Buildings Decommissioned	TBL
All Land Remediated	212

All Land De-designated

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities Timescale Strategic Outcome

Spent Fuels

All spent fuels discharged from the operating Advanced Gas-Cooled Reactor (AGR) power stations and defueling of all Magnox power stations reactors are sent to Sellafield for management. The receipt of AGR fuels will continue until the end of the AGR electricity programme, whilst all the Magnox fuel has now been received at Sellafield. The management of AGR fuel under contracts with EDF Energy provides a significant income stream to NDA

Spent Magnox Fuel

First Generation Magnox Storage Pond Complete the capability to export all fuel for interim storage	2021-2022	2
Complete Magnox reprocessing and continued interim storage in FHP for any remnant fuel	2020-2021	3 4
Spent Oxide Fuel		
Enhance capacity to receive/manage and interim store AGR spent fuel from EDF Energy, to support bulk defueling	2020-2023	6 9
Spent Exotic Fuel		
Continue to receive Dounreay spent exotic fuel to be reprocessed or stored, and develop		

Integrated Waste Management

The various activities across the site produce wastes in many forms. These require varying degrees of treatment and onward processing. The site continues to focus on safe, efficient management of these wastes, including: the conversion of Highly Active Liquor (HAL) into passively safe vitrified waste; the return of vitrified material overseas; and the management of on-site intermediate and low level wastes.

The areas of principal focus are the redundant Legacy Ponds and Silos facilities, made up of the Pile Fuel Storage Pond, Pile Fuel Cladding Silo, First Generation Magnox Storage Pond and Magnox Swarf Storage Silo. These facilities supported the development of the nuclear programme in the UK from the early 1950s. Subsequently they supported electricity generation from the fleet of Magnox power stations. The programmes include the removal of nuclear fuel, sludge and solid material which require the provision of equipment to retrieve the various wastes and then treat and store them in passive condition.

This process needs to take into account the role of integrated waste management in achieving hazard reduction and long-term safety, security and environmental protection requirements.

Low Level Waste

Dounreay

Continue to generate savings and preserve capacity at the Low Level Waste Repository by
enhancing capability to divert waste to LLWR and the supply chain

alternative capability for receipt and management of remaining spent exotic fuels from

2020-2023

2020-2023

2020-2021



Intermediate Level Waste

Pile Fuel Storage Pond (PFSP)

• Due aveceeete	ط امیرمنیوس		uranta alcina sithau		d + a a a +
 Progress waste 	retrieval b	v navina	waste skips eitner	exported or rea	lav to export
		,	made on apo on and	57 (p 5 . 15 d 5 . 15 d	,
_					

Demonstrate pond dewatering capability through completion of the bay dewatering trials

2020-2023 31

First Generation Magnox Storage Pond (FGMSP)

Support risk reduction from FGMSP through continued removal of fuel and waste from the facility

Magnox Swarf Storage Silo

Commence retrievals from MSSS

• Progress the capability required for bulk retrievals

2021-2022 2020-2023

Support the NDA's strategy by continuing the programmes to receive and treat waste materials from Harwell and AWE Aldermaston

2020-2023

Support future waste treatment through implementing the capability to actively demonstrate characterisation, size reduction and decommissioning

2020-2023 32

Support risk reduction by developing additional capability for treatment of intermediate level liquid wastes and storage of by-products

Support future decommissioning through optimisation of future storage and treatment

2020-2023 32

arrangements

High Level Waste

Continue the programme	to repatriate overseas-owned vitrified waste to its country of origin	2020-2023
	nt decommissioning by establishing the capability and commencing	2020-2023



Key Activities Timescale Strategic Outcome

Nuclear Materials

Sellafield is the custodian of the majority of the UK's inventory of separated plutonium which is held in safe and

Plutonium

Continue the safe and secure storage of plutonium by developing the capability	2020-2023	
to repack/retreat plutonium in line with UK policy	2020-2023	1





Uranics

Support future decommissioning by implementing plans for consolidated
storage of Sellafield uranics



2020-2023



Site Decommissioning and Remediation

Decommissioning and demolition

Complete decommissioning and demolition of the upper diffuser section of the Windscale Pile Chimney Number 1	2020-2022	42 43
Establish decommissioning capability by implementing the alpha and beta gamma decommissioning programmes	2020-2021	43
Commence post operational clean-out (POCO) of Magnox Reprocessing Plant	2020-2021	42

Critical Enablers

A number of key enabling activities require specific focus, ranging from infrastructure refurbishment or replacement projects, through to key change programmes which aim to improve operational delivery and efficiency on site.

Continue the Sellafield transformation to support future business requirements including the development and embedding of a value-led culture	2020-2023	-
Develop and embed the long-term partnership with the supply chain	2020-2023	-
Progress the transformation of project delivery on site and continue to embed the Programme and Project Partnership	2020-2023	-
Support small and medium enterprise organisations by targeting overall spend with them in line with the government growth agenda	2020-2023	-
Continue the Sellafield security enhancement programme	2020-2023	-
Continue with improvements to the site utilities infrastructure and new Steam Generating Plant	2020-2023	-
Continue the programme to ensure the analytical services capability is available to support the mission	2020-2023	-
Embed the key tenets of the Industrial Strategy, including the Nuclear Sector Deal	2020-2023	-
Working to embed the capability to proactively protect, detect, respond and recover against current and evolving cyber threats	2020-2023	-
Maintain an asset management regime that takes into account the impact of asset condition on meeting regulation	2020-2023	-
Regulatory Control		
Ensure discharges are in line with UK discharge strategy	2020-2023	-
Reduce environmental risk (including retrieval and treatment of legacy wastes, reduction of HAL stocks)	2020-2023	-



Magnox is an NDA subsidiary, responsible for 12 nuclear sites across the UK: Berkeley, Bradwell, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterson A, Oldbury, Sizewell A, Trawsfynydd, Winfrith and Wylfa. Magnox also generates electricity at the Maentwrog hydroelectric plant.

Planned expenditure for 2020/21

£515 million

Magnox became a wholly owned subsidiary of the NDA on 1st September 2019. The newly appointed Magnox Board and Executive are now in post and the focus of the new leaership team will be to ensure safe decommissioning progress while delivering value for the UK taxpayer.

In the following pages, the activities and dates shown are based on current understanding of the plans and are subject to change as the new Magnox Executive Team rebuilds the lifetime plan.

In the meantime the sites will continue to focus on the key activities as outlined in pages 42-54.

Key Activities	Timescale	Strategic Outcome
Site Decommissioning and Remediation		
Decommissioning and demolition		
Continue estate decommissioning and demolition activities working towards interim states	2020-2023	42 43
Continue focus on the major risk of asbestos including production of an optimised, underpinned strategy for asbestos, without detriment to Care and Maintenance	2020-2023	42
Develop continuous reactor dismantling strategy	2020-2023	42
Development of mature decommissioning capability to support One NDA	2020-2023	42
De-designate or Reuse		
Continue working with regulators to ensure appropriately scaled management arrangements and permissioning for interim states and interimend states are determined and agreed	2020-2023	44
Develop Interim State approaches, utilising revised management arrangements	2020-2023	44
Monitor management and maintenance arrangements for sites in Care and Maintenance	2020-2023	44
Progress land de-designation and release to support re-use	2020-2023	47
Provide support to nuclear new build	2020-2023	47
Nuclear Materials		
Uranics		
Continue the programme for the transfer of nuclear materials	2020-2023	22
Regulatory permissioning in support of the transfer of nuclear materials between sites	2020-2023	22
Integrated Waste Management		
Low Level Waste		
Delivery of the Magnox elements of the estate-wide low level waste management plan, including diversion to alternative treatment	2020-2023	26 27 28 29
Intermediate Level Waste		
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Continue to pursue opportunities to consolidate ILW to interim stores	2020-2023	33
Critical Enablers		
Support the government in activities to deliver the new build agenda and preparations for decommissioning the AGR fleet	2020-2023	-
Continue information governance activities and supporting processes	2020-2023	-
Continue delivery of the sift & lift programme to rationalise all Magnox records and transfer as appropriate to NDA Archive in Wick	2020-2023	-
Support small and medium enterprise organisations by targeting overall spend with them in line with government growth agenda	2020-2023	-
Support NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal	2020-2023	-
Continue the enhancement of cyber capability	2020-2023	-
Continue delivery of the asset care programme	2020-2023	-



Site in Gloucestershire

27 hectares

Hectares de-designated

11 hectares

16 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)			
Free from Spent Fuel	ACHIEVED		
Free from Nuclear Materials	ACHIEVED		
Free from Radioactive Waste	TBD		
All Buildings Decommissioned	TBD		
All Land Remediated	2079		
All Land De-designated	2079		
'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.			

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Intermediate Level Waste		
Complete Design and Build of ILW retrieval plant	2020-2023	31
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Continue retrieval and packaging activities in the active waste vaults	2020-2023	32
Retrieve waste from shielded area (caves)	2020-2022	32 33
Complete Design and Build of ILW encapsulation facility	2020-2021	32
Encapsulation of ILW packages	2021-2023	32
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities ongoing in preparation for entry into Care and Maintenance	2020-2023	42 43

Bradwell in Care and Maintenance

Site in Essex

20 hectares

Hectares de-designated

0 hectares

All 20 hectares remain covered by the nuclear site licence.

Free from Spent Fuel Free from Nuclear Materials Free from Radioactive Waste All Buildings Decommissioned All Land Remediated All Land De-designated TBD All Land De-designated TBD TBD TBD TBD

Key Activities	Timescale	Strategic Outcome
Site Decommissioning and Remediation		
De-designate and Reuse		
Ongoing management of site during Care and Maintenance period	2020-2023	44

Chapelcross

Site in Dumfries and Galloway

96 hectares

Hectares de-designated

0 hectares

All 96 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)				
	Free from Spent Fuel	ACHIEVED		
	Free from Nuclear Materials	ACHIEVED		
	Free from Radioactive Waste	TBD		
**	All Buildings Decommissioned	TBD		
**	All Land Remediated	2095		
(m) (9)	All Land De-designated	2095		
'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.				

Timescale	Strategic Outcome
2020-2023	31 32 33
2020-2022	32
2020-2021	32
2020-2023	33
2020-2023	42
2020-2023	42 43
	2020-2023 2020-2022 2020-2021 2020-2023

Dungeness A

Site in Kent

20 hectares

Hectares de-designated

0 hectares

All 20 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Free from Spent Fuel	ACHIEVED
Free from Nuclear Materials	ACHIEVED
Free from Radioactive Waste	TBD
All Buildings Decommissioned	TBD
All Land Remediated	2097
All Land De-designated	2097

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Low Level Waste		
Complete active commissioning of the Modular Active Effluent Treatment Plant	2020-2021	32
Intermediate Level Waste		
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43
Preparatory works for Safe Store Project	2020-2023	43
Complete the current asbestos removal programme within the reactor buildings	2020-2021	42

Harwell

Site in Oxfordshire

108 hectares

Hectares de-designated

22 hectares

86 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)		
Free from Spent Fuel	ACHIEVED	
Free from Nuclear Materials	2025	
Free from Radioactive Waste	TBD	
All Buildings Decommissioned	TBD	
All Land Remediated	2064	
All Land De-designated	2064	

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Nuclear Materials		
Uranics		
Continue the programme for the transfer of nuclear materials	2020-2023	22
Integrated Waste Management		
Intermediate Level Waste		
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities	2020-2023	42 43
Continue preparations for decommissioning of radium chemistry facilities	2020-2023	42
Continue decommissioning, demolition and land remediation of the Liquid Effluent Treatment Plant (LETP)	2020-2023	42 43 46
De-designate or Reuse		
Continue incremental release of land to the Harwell campus through targeted demolitions, remediation and clearance of land tracts	2020-2023	47

Hinkley Point A

Site in Somerset

20 hectares

Hectares de-designated

0 hectares

All 20 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Fre	ee from Spent Fuel	ACHIEVED
Fre	ee from Nuclear Materials	ACHIEVED
Fre	ee from Radioactive Waste	TBD
All	Buildings Decommissioned	TBD
All	Land Remediated	2090
\(\text{All}	Land De-designated	2000

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Low Level Waste		
Complete active commissioning of the Modular Active Effluent Treatment Plant	2020-2021	28
Intermediate Level Waste		
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Complete commissioning of ILW store	2020-2023	32
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43

Hunterston A

Site in Ayrshire

15 hectares

Hectares de-designated

0 hectares

All 15 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)			
Free from Spent Fuel	ACHIEVED		
Free from Nuclear Materials	ACHIEVED		
Free from Radioactive Waste	TBD		
All Buildings Decommissioned	TBD		
All Land Remediated	2080		

All Land De-designated

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome	
Integrated Waste Management	Integrated Waste Management		
Intermediate Level Waste			
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33	
Continue complete solid active waste bunker retrieval operations excluding post operational clean out	2020-2023	31	
Construct and commission the solid ILW encapsulation plant	2020-2022	32	
Site Decommissioning and Remediation			
Decommissioning and Demolition			
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43	
Continue preparations for demolition of the cooling pond overbuilding	2020-2023	43	
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance			

Oldbury

Site in South Gloucestershire

47 hectares

Hectares de-designated

32 hectares

15 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Free from Spent F	uel ACHIEVED
Free from Nuclear	Materials ACHIEVED
Free from Radioad	tive Waste TBD
All Buildings Deco	mmissioned TBD
All Land Remediat	red 2103
All Land De-desig	nated 2103

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Intermediate Level Waste		
Continue ILW retrieval enabling works	2020-2023	31
Progress activities supporting consolidated ILW storage	2020-2023	33
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43

Sizewell A

Site in East Suffolk

14 hectares

Hectares de-designated

0 hectares

All 14 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)		
Free from Spent Fuel	ACHIEVED	
Free from Nuclear Materials	ACHIEVED	
Free from Radioactive Waste	TBD	
All Buildings Decommissioned	TBD	
All Land Remediated	2097	

All Land De-designated

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

		Strategic
Key Activities	Timescale	Outcome
Integrated Waste Management		
Intermediate Level Waste		
Continue preparation for ILW retrievals	2020-2023	31
Progress activities to support consolidation of ILW storage	2020-2023	33
Progress activities to retrieve, treat and store ILW	2021-2023	31 32 33
Manage receipt of waste packages at Bradwell Site	2020-2023	33
Continue ILW retrieval enabling works	2020-2023	31
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43
Complete ponds stabilisation	2020-2021	42

Trawsfynydd

Site in North Wales

15 hectares

Hectares de-designated

0 hectares

All 15 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Free from Spent Fuel	ACHIEVED
Free from Nuclear Materials	ACHIEVED
Free from Radioactive Waste	TBD
All Buildings Decommissioned	TBD
All Land Remediated	2083
All Land De-designated	2083

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome	
Integrated Waste Management	Integrated Waste Management		
Intermediate Level Waste			
Continue and complete ILW retrievals and encapsulation	2020-2023	31 33	
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33	
Site Decommissioning and Remediation			
Decommissioning and Demolition			
Continue development of strategy for ponds end state conditions	2020-2023	42	
Decommissioning (including asbestos removal) and demolition activities in preparation for entry into Care and Maintenance	2020-2023	42 43	
Continue height reduction preparations	2020-2023	43	

Winfrith

Site in Dorset

95 hectares

Hectares de-designated

10 hectares

85 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Free from Spent Fuel	ACHIEVED
Free from Nuclear Materials	ACHIEVED
Free from Radioactive Waste	TBD
Site in interim end state	2023*

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

*Subject to change following review by the new Magnox Executive

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Low Level Waste		
Continue and complete shipments of LLW drums to LLWR	2020-2022	28
Site Decommissioning and Remediation		
Decommissioning and Demolition		
DRAGON – continue reactor decommissioning	2020-2023	42
Steam Generating Heavy Water Reactor (SGHWR) – continue decommissioning of the primary and secondary containment areas	2020-2023	42
Decommissioning (including asbestos removal) and demolition activities	2020-2023	42 43



Wylfa

Site in Anglesey

21 hectares

Hectares de-designated

0 hectares

All 21 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Free from Spent Fuel	ACHIEVED
Free from Nuclear Materials	ACHIEVED
Free from Radioactive Waste	TBD
All Buildings Decommissioned	TBD
All Land Remediated	2105
All Land De-designated	2105

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Intermediate Level Waste		
Prepare for ILW retrievals and packaging	2020-2023	31
Progress activities to retrieve, treat and store ILW	2020-2023	31 32 33
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Prepare for decommissioning (including asbestos removal) and demolition for entry into Care and Maintenance	2020-2023	42 43
Continue asbestos removal from turbine hall	2020-2023	42

Dounreay Site Restoration Limited

Dounreay Site Restoration Ltd (DSRL) is responsible for cleaning up and decommissioning the Dounreay site in the north of Scotland. It also operates a Low Level Waste (LLW) disposal facility to deal with waste from the site. The organisation is owned and managed by parent body organisation Cavendish Dounreay Partnership.

Important milestones

The activities below give the current understanding of the lifetime plan and are subject to change.

2025

- All fuel in long-term storage or shipped off site.
- Dounreay Fast Reactor (DFR) dismantled

2027

 Prototype Fast Reactor (PFR) dismantled

2028

 Shaft and silo encapsulation complete

2031

 Site clearance and environmental restoration phase 3 complete

2032-33

• Interim end state achieved

Planned expenditure for 2020/21

£200 million

Site in Northern Scotland

60 hectares

(plus 12 hectares designated for LLW facility) in Caithness.

Hectares De-designated

0 hectares

60 hectares remain covered by the nuclear site licence, the 12 for the LLW facility are designated but not licensed.

SITE PROGRESS (ACHIEVED AND EXPECTED)

Defueled	2025
Free from Nuclear Materia	ds TBD
Free from Radioactive Wa	ste TBD
All Buildings Decommission	oned TBD
All Land Remediated	TBD
All Land De-designated	TBD

'TBD' is shown when the date for completing the strategic outcome is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Spent Fuel		
Spent Exotic Fuel		
Continue removal of Breeder Fuel elements from DFR	2020-2021	1
Complete delivery of all in reactor DFR Breeder Fuel to Sellafield	2021-2023	12
Complete delivery of all fuels from DFR	2021-2023	12
Nuclear Materials		
Continue consolidation of remaining unirradiated exotics material (remnants)	2020-2023	-
Integrated Waste Management		
Low Level Waste		
Continue transfer of LLW to LLW vault	2020-2023	27
Complete design and build of D3110 Waste Treatment Plant	2022-2023	28
Intermediate Level Waste		
Complete construction of Dounreay Cementation Plant (DCP) Store Extension Construction	2021-2022	32
PFR Raffinate Immobilisation Complete	2022-2023	32
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Dounreay Material Test Reactor Building Complex Decontamination Complete	2021-2023	42
PFR - Complete removal of Alkali Metal Lab	2020-2021	42
PFR - Irradiated Fuel Cave Post Operational Clean Out to permit installation of Irradiated Fuel Loading Equipment	2021-2022	42
PFR - Removal of Sodium Disposal Plant Equipment (not tanks)	2021-2022	42
PFR - Complete Reactor Vessel Residual Na Treatment Operations - Turn Reactor Vessel atmosphere from nitrogen to air	2022-2023	42
Dounreay Material Test Reactor Structures demolished	2022-2023	43
Dedesignate or Reuse		
NDA and Regulatory permissioning in support of the Interim End State definition and arrangements for Dounreay	2020-2023	44
Critical Enablers		
Support small and medium enterprise (SME) organisations by measuring and reporting overall spend with them in-line with government growth agenda	2020-2023	-

56



EXECUTE LLW Repository Ltd

LLWR Limited

Low Level Waste Repository is managed under a parent body organisation model and owned by Nuclear Waste Management Ltd. It manages and operates the UK's low level waste repository in west Cumbria, providing safe, permanent disposal for a range of radioactive wastes. It's also responsible for delivering the UK's national low level waste programme and associated waste management services.

Important milestones

2021

• PCM Demolition

2028

Final capping of Vault 8

2135

Final site clearance achieved

Planned expenditure for 2020/21

£82 million

Site in Cumbria

99 hectares

Hectares De-designated

0 hectares

All 99 hectares remain covered by the nuclear site licence.

SITE PROGRESS (ACHIEVED AND EXPECTED)

All Buildings Decommissioned

TBD

All Land Remediated

TBD 2135

All Land De-designated

'TBD' is shown when the date for completing the strategic outcome

is not sufficiently clear for a specific date to be given.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management		
Low Level Waste		
Deliver the national LLW Programme to optimise LLW Strategy implementation. Work with consigning SLCs to improve waste forecast and inventory and continue segregated waste, treatment and disposal services	2020-2023	26 27 28 29
Intermediate Level Waste		
Work with NDA to support innovation in approaches to waste management of IWM	2020-2023	32 33 34
Type B Packaging capability to support NDA and MOD customers	2020-2023	33
Site Decommissioning and Remediation	2020-2023	
New Build and Operations	2020-2023	
Enabling works for phased construction of the final cap for trenches 1 to 7 and Vault 8	2020-2023	41
Critical Enablers		
Support hazard reduction across the NDA group	2020-2023	-
Manage and operate LLWR safely to provide an effective UK disposal service	2020-2023	-
Consider options to further optimise operations at the LLWR	2020-2023	-
Continue to pursue overall cost savings in delivery of the Lifetime Plan	2020-2023	-
Support small and medium enterprise organisations by targeting overall spend with them in line with the government growth agenda	2020-2023	-
Active participation in the Nuclear Sector Deal and the North West Nuclear Arc to help achieve HMG key deliverables	2020-2023	-
Manage the existing LLWR Management and Operations contract through to completion and transition to new ownership arrangements	2020-2023	-
Deliver the LLWR Transformation Programme and actively support the development of One NDA	2020-2023	-
Regulatory Control		
Contribute to sustainability performance under the Greening Government Commitments (GGC)	2020-2023	-



Radioactive Waste Management Limited

Radioactive Waste Management (RWM) Ltd is an NDA subsidiary, responsible for delivering a geological disposal facility in the UK, on behalf of the NDA. This includes finding a suitable site with a willing community to host this permanent and safe solution for managing radioactive waste.

Key Activities	Timescale	Strategic Outcome
Integrated Waste Management – Intermediate and High Level Waste		
Implement government policy on geological disposal of higher activity waste	2020-2023	34 39
Work proactively with waste producers, planning for and delivering waste management solutions	2020-2023	34 39
Deliver a robust technical programme, support the GDF programme and waste management	2020-2023	34 39
Critical Enablers		
Develop RWM into a high performing delivery organisation	2020-2023	-
Continue to work with each community to provide information and help develop a detailed community vision	2020-2023	-
Work in partnership with communities to evaluate potential sites for a GDF	2020-2023	-
Design studies for specific sites, initial safety analyses, and environmental and economic assessments to help establish whether sites could be suitable	2020-2023	-



International Nuclear Services Limited

International Nuclear Services (INS) is an NDA subsidiary, with locations in the UK, France and Japan. It provides specialist nuclear transport, design and licensing services to the NDA group, as well as to a range of domestic and international customers. It also operates the nuclear shipping company, Pacific Nuclear Transport Ltd, the world's most experienced marine transporter of specialist nuclear materials.

Key Activities	Timescale	Strategic Outcome
Nuclear Materials – Plutonium and Uranics		
Support the NDA's decommissioning programme by providing transport and technical solutions for movements of nuclear material in the UK.	2020-2023	17 22
Integrated Waste Management – High Level Waste		
Continue to deliver important international transports of vitrified High Level Waste (HLW) and conditioned Intermediate Level Waste (ILW).	2020-2023	36 37
Critical Enablers		
Continue to deliver important international transports of spent mixed oxide (MOX) fuel	2020-2023	-
Seek opportunities for new UK and international business within nuclear shipping, packaging and design and establish a consultancy that provides transport enabling solutions to UK and international markets.	2020-2023	-
Maintain a leading fleet of specialist nuclear transport vessels and crews that, by undertaking regular shipments, meets the highest standards of quality, safety and security.	2020-2023	-
Continue to develop a strategic partnership with Direct Rail Services including the creation of a joint consultancy offering that combines the nuclear transport capabilities of both organisations.	2020-2023	-
Implement a series of transformation activities that make INS more competitive, innovative and efficient whilst ensuring it has the right skills, capability and diversity of talent to deliver in a safe, secure and reliable manner.	2020-2023	-



Direct Rail Services Limited

Direct Rail Services (DRS) is an NDA subsidiary, providing expert and specialist nuclear transport services to support the NDA mission. A world leader in safe, secure and reliable nuclear logistics, DRS also has contracts with domestic customers, providing other tailored rail logistics solutions.

		A large state
Key Activities	Timescale	Strategic Outcome
Spent Fuels – Spent Oxide Fuel		
Support AGR fuel movements by rail for EDF from stations to Sellafield, including preparations for the AGR defueling programme	2020-2023	6
Nuclear Materials – Plutonium and Uranics		
Support national nuclear material rail movements for Harwell, Winfrith and DSRL	2020-2023	17 22
Delivery of the rail transport element in support of the Exotics programme	2020-2023	12 17
Critical Enablers		
Provide assistance in the development of the NDA transport and logistics strategy	2020-2023	-
Support the discharge of NDA obligations with respect to MOD nuclear rail transportation	2020-2023	-
Provide value for money to the taxpayer through the execution of identified non-nuclear work that complements the skills and capabilities required to support the core nuclear mission	2020-2023	-
Provide rail authority and other associated expertise to the NDA in considering areas of synergy between DRS and INS in support of the NDA's strategic transport capability	2020-2023	-
Operate and maintain technology leading fleet of locomotives to support NDA operations	2020-2023	-
Attract and retain the necessary skills, capability and diversity of talent to deliver our rail logistics business in a safe, secure and reliable manner	2020-2023	-



NDA Archives Limited

NDA Archives is an NDA subsidiary, responsible for the Nucleus (the Nuclear and Caithness Archives). The facility is operated by a commercial partner and provides long-term records management and archiving services for the NDA group.

Key Activities	Timescale
Critical Enablers	
Mature and implement the NDA Group Heritage Strategy	2020-2021
Develop NDA Group Digital Preservation and Digitisation strategies and policies	2020-2021
Development of the Hub and Spokes delivery model – centralised inventory and management with dispersed, off-site storage	2020-2021
Accession the outputs from the Sellafield and Magnox sift and lift projects	2020-2023
Capacity management planning	2020-2023
Re-competition of the commercial partner contract	2022-2023



NDA Properties Limited

NDA Properties Ltd is an NDA subsidiary, holding and managing the majority of the non-nuclear property assets within the NDA group.

Key Activities	Timescale
Critical Enablers	
Effective and efficient management and assurance of retained landholding consisting of 1203 hectares and in excess of 100 properties	2020-2023
Effective management of Landlord's Essential works Programme, including property portfolio projects for repair work and improved environmental stewardship	2020-2021
Effective management of Hinton House including collaborative partnership working with Sellafield Ltd to align with the award on the next generation Facilities Management contract	2020-2021
Transfer land and property back to NDA where it is established the land is required for operational purposes	2020-2023
Proactively dispose/release surplus assets no longer required by the NDA Group or wider parts of government, including those that have high socio-economic value	2020-2022

Rutherford Indemnity Limited

Rutherford Indemnity Limited

Rutherford Indemnity Ltd provides insurance cover for the NDA group. It has a particular focus on nuclear liability cover and the provision of support for changes to insurance requirements. The organisation is an NDA subsidiary, managed for the NDA by Marsh Captive Managementservices, and has no direct employees.

Key Activities	Timescale
Critical Enablers	
Provide optimal insurance coverage to the NDA to support its NDA group-wide insurance programme and exploit opportunities to reduce overall cost of insurance risk	2020-2023
Explore all avenues to develop potential innovative solutions to the increased financial security or insurance requirement resulting from the Nuclear Installations (Liability For Damage) Order 2016 and to respond to demands for new or additional policy or cover	2020-2023
Continue to deliver the target return on the investment portfolio, protecting Rutherford's ability to offer insurance on a cost effective basis, maintaining liquidity in order to be able to respond promptly to a major loss	2020-2023
Continue to use a prudent proportion of Rutherford's assets to support infrastructure investment within the NDA group	2020-2023
Assist with the NDA group insurance broker tender to ensure all outsourced activities improve efficiency and are aligned to support NDA group Insurance Strategy	2020-2023
Develop and implement comprehensive major incident claims management solution	2020-2021
Procure Third Party Administrator to implement NDA-controlled nuclear liability claims handling administration	2020-2021

Energus

ENERGUS.

Energus is an NDA subsidiary that provides a dedicated centre of excellence, offering a range of training, education and business support services geared to providing and enhancing skills within both the local and national nuclear workforce. Energus is the north west flagship delivery centre for the National Skills Academy for Nuclear (NSAN).

Key Activities	Timescale
Critical Enablers	
Continue to work closely with the NDA and stakeholders across the nuclear sector to upskill and develop the workforce of today and tomorrow	2020-2023
Continue to manage and facilitate a number of training opportunities for the NDA group and wider nuclear sector; including nucleargraduates, cyber security graduates and apprentices and other bespoke programmes to support the NDA People Strategy	2020-2023
Continue to work in partnership with the National Cyber Security Centre (NCSC) and NDA Cyber Security Resilience (CSRP) to deliver a pipeline of cyber security young talent into the sector. Deliver CyberFirst and be the venue of choice for Cyber Security training in the North West	2020-2023
Continue to be a Cumbrian venue of choice for the NDA group's events, conferences and delivery of training and education.	2020-2023

Springfields

- Planned expenditure for 2020/21 £18 million
- 81 hectare site in Lancashire.
- All 81 hectares remain covered by the nuclear site licence.

Owned by Westinghouse Electric UK Holdings Limited

Springfields is a nuclear fuel manufacturing site and is located near Preston in Lancashire. The site is operated by Springfields Fuels Limited (SFL) and is



used to manufacture a range of fuel products for UK and international customers, the processing of historic uranic residues and decommissioning of 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.

Key Activities	Timescale	Strategic Outcome
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Complete post operational clean out of the Residues Recovery Plant	2020-2022	42
Continue decommissioning of the Magnox Island	2020-2022	42

Capenhurst

- Planned expenditure for 2020/21 £55 million
- 31 hectare site in Cheshire.
- 17 hectares have been de-designated.
- Modification of Designating Direction signed by the Minister in May 2010 and July 2012.
- All 14 hectares remain covered by the nuclear site licence.

Owned by URENCO

The NDA Capenhurst site is located near Ellesmere Port in Cheshire.

In 2012, the site was transferred to URENCO, owners of the adjacent licensed site, and was amalgamated into a single nuclear licensed site. 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 the NDA.

enco

UNS manages a large proportion of the NDA's uranic inventory and also provides broader decommissioning and demolition works for redundant facilities, in order to reduce liability and optimise space utilisation on site.

Key Activities	Timescale	Strategic Outcome
Site Decommissioning and Remediation		
Decommissioning and Demolition		
Continue decommissioning and demolition of key facilities	2020-2023	42 43
Nuclear Materials		
Uranics		
Continue receipt and safe storage of uranic materials	2020-2023	24
Continue the safe storage and management of uranic materials, including uranium Tails Management Facility	n hexafluoride tails pr	ior to processing through the

References

1. Energy Act (2004)

Useful links

- Nuclear Decommissioning Authority (www.gov.uk/nda)
- Department for Business, Energy and Industrial Strategy (www.gov.uk/beis)
- Sellafield Ltd (www.gov.uk/government/organisations/sellafield-ltd)
- Magnox Ltd (www.gov.uk/government/organisations/magnox-ltd)
- LLWR Ltd (www.gov.uk/government/organisations/low-level-waste-repository-ltd)
- Dounreay Ltd (www.gov.uk/government/organisations/dounreay)
- International Nuclear Services Ltd (www.innuserv.com)
- Radioactive Waste Management Ltd (www.gov.uk/government/organisations/ radioactive-waste-management)
- Direct Rail Services Ltd (www.directrailservices.com)
- URENCO Ltd (www.urenco.com)
- Springfields Fuels Ltd (www.westinghousenuclear.com)

Useful documentation

- NDA Strategy March 2016 (www.gov.uk/government/consultations/ nuclear-decommissioning-authority-draft-strategy)
- NDA Annual Report and Accounts 2018-19 (www.gov.uk/government/publications/ nuclear-decommissioning-authority-annual-report-and-accounts-2018-to-2019)
- NDA Mission Progress Report
 www.gov.uk/government/publications/nuclear-decommissioning-authority-mission-progress-report
- Mid-Year Performance Report 2018-2019 (www.gov.uk/government/publications/nda-mid-year-performance-report-2018-to-2019)
- NDA Direct Research Portfolio (DRP) Projects 2018/19: Quarter four update (www.gov.uk/government/publications/nda-direct-research-portfolio-drp-projects-quarterly-update)
- NDA 5-year research and development plan 2019 to 2024
 (www.gov.uk/government/publications/nda-5-year-research-and-development-plan-2019-to-2024)
- NDA SME Action Plan 2019 to 2022 (www.gov.uk/government/publications/nda-sme-action-plan-2019-to-2022)
- Sellafield Ltd Transformation Plan (www.gov.uk/government/publications/transformation-plan)

Glossary

AGR Advanced Gas-Cooled Reactor

BEIS Department for Business, Energy and Industrial Strategy

BEPPS Box Encapsulation Plant and Product Store

DFR Dounreay Fast Reactor
DRS Direct Rail Services Ltd

DSRL Dounreay Site Restoration Ltd

ED&I Equality, Diversity and Inclusion

FHP Fuel Handling Plant

GDF Geological Disposal Facility

HAL Highly Active Liquor

ILW Intermediate Level Waste

INS International Nuclear Services Ltd

LETP Liquid Effluent Treatment Plant

LLW Low Level Waste

LLWR Low Level Waste Repository

NDA Nuclear Decommissioning Authority

POCO Post Operational Clean Out

PFR Prototype Fast Reactor
PPP Programme and Project

PPP Programme and Project PartnerR&D Research and Development

SEP Silo Emptying Plant

SME Small and Medium EnterpriseTHORP Thermal Oxide Reprocessing Plant

UKGI UK Government Investments

NDA

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