National Decommissioning & Waste Management Pipeline

Nuclear Sector Deal
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Acknowledgements

Thanks to the following organisations who have provided significant support to the production of the National Decommissioning and Waste Management Pipeline:

[A list of logos and names of organisations]
The Nuclear Sector Deal (NSD) was launched on 28 June 2018 and is a commitment by the sector to work collaboratively, with support from government, to deliver on the Industrial Strategy, drive clean growth throughout the economy and make civil nuclear power an integral part of the UK’s energy future.

The Sector Deal aims to build on the long history partnership between the government and industry that has helped the UK become one of the leading nuclear countries in the world. Strengthened collaboration and leadership from industry will underpin the successful delivery of the Sector Deal.

Ensuring there is the required participation from the industry and government, the Sector Deal was developed by the Nuclear Industry Council (NIC), whose membership consists of leaders from energy, manufacturing, trade unions, academia, engineering, science and research, together with government representatives.

Beneath the leadership of the NIC, there is broad participation from industry and supply chain, as illustrated in the diagram on page 2. To ensure the successful implementation of the various elements of the Sector Deal, there are five working groups responsible for delivery of the commitments. The NSD Programme Board manages all the sub-groups and reports into the NIC and the Department for Business, Energy and Industrial Strategy (BEIS). The Board is supported by a Programme Management Office (PMO). All groups within the organisation of the Sector Deal play a vital part in maintaining momentum and keeping the industry engaged as the Sector Deal evolves, develops and is delivered.

The National Decommissioning and Waste Management Pipeline is a key deliverable of the Sector Deal. The joint review demonstrates the progress that can be achieved when industry and government works collaboratively, which is vital for a prosperous UK nuclear industry. I’m delighted to see the Pipeline bring cross sector information and data together, to establish a platform that can be used to understand opportunities to deliver better value for money across the sector. The Pipeline is a strong foundation to build innovative approaches to key challenges including technical problems, commercial frameworks, skills planning and an integrated approach to waste management which are crucial to deliver the Sector Deal’s commitment of a 20% cost reduction of decommissioning by 2030.

This is an important demonstration, not just of the value of the collaborative approach envisioned in the Sector Deal, but also of industry’s and government’s commitment to the Sector Deal target.

Dr Tim Stone CBE  
Industry Co-Chair  
Nuclear Industry Council


Nuclear Sector Deal

Management Structure

Nuclear Sector Deal commitments

- 30% reduction in New Build costs
- 20% reduction in decommissioning costs
- £2 billion of domestic and international contract wins
- Improved regional supply chain
- Development and support of SMR’s Advanced manufacturing and construction programme
- Diverse, highly skilled nuclear workforce
- 40% women in nuclear by 2030
- 50% female apprentice participation by 2021

Programme Board (PB)

Senior Oversight Body: Heads of Government Department and the Nuclear Industry

Programme Management Office (PMO)

The PMO will provide a secretariat and support function to the PB

Working Groups

- Nuclear Innovation Research Advisory Board (NIRAB)
- Nuclear Exports
- Supply Chain
- New Build Cost Reduction
- Legacy Cost Reduction
- Winning UK
- Future Workforce
- Inovation and R&D

Senior Lead

Humphrey Cadoux-Hudson

Programme Management Board (PMB)

Lead:

- Simon Bowen (Cavendish Nuclear)
- Andy Storer (Nuclear AMRC)
- Fiona Rayment (NSSG/NIRO)
- Mike Tynan (NIRAB)
- Mike Tynan (NIRAB)
- Humphrey Cadoux-Hudson

Strategic Oversight

- BEIS Internal Requirements as a frequent to meet regularly to the NIC as well working groups. Reporting to the NEC will manage all the quarterly progress.

Lead:

- 30% reduction in New Build costs
- 20% reduction in decommissioning costs
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Lead:
Executive summary

Since the launch of the Nuclear Sector Deal in June 2018, I have established a Legacy Cost Reduction Working Group which draws together organisations from across the sector with the aim of delivering the Sector Deal’s commitment to improve taxpayer and economic value from nuclear decommissioning.

Over the past year we’ve made progress in setting actions in train that will help to achieve a 20% reduction in the cost of decommissioning, compared to 2018 estimates. The announcement of the first ever National Decommissioning and Waste Management Pipeline is a big step in helping the sector unlock significant opportunities for the UK economy, reducing barriers to entry for the supply chain, creating jobs and driving focused innovation.

The core team, which consists of members across government and the supply chain, have led the joint review of the Pipeline. The scope of the review has included all significant future decommissioning and waste management projects, covering civil, defence, medical, research facilities and Naturally Occurring Radioactive Material (NORM) from sectors such as oil and gas. The development of the Pipeline has been heavily supported by many organisations that have provided significant input and support to this transformational journey of bringing the nuclear sector closer together.

I am delighted to see the production of the National Decommissioning and Waste Management Pipeline and I’m confident it will create great benefit for both the civil and defence nuclear industry. I want to extend my thanks to the core team who have been instrumental in leading and producing this Pipeline, the first of its kind to consolidate major decommissioning and waste management plans from across the sector. I would also like to thank all of the organisations and individuals who have given their time and experience in support of the Pipeline’s development.

We have made excellent progress but there’s much still to be done by all. I’m looking forward to continuing my Legacy Cost Working Group’s programme further as the Pipeline is instrumental in the delivery of our commitments, and this document will be refreshed and updated on an annual basis by the group. This will play an important role in creating a transparent, transformational, collaborative and innovative nuclear industry in which every member can be proud to be part of.

Simon Bowen
Legacy Cost Reduction Lead

Working group representatives are: Ivan Baldwin (NNL), Marie Carlick (DBD), Val Drake (Magnox), Mina Golshan (ONR), Jerry Haller (EDF Energy), Corhyn Parr (NIA Decommissioning Group), Adrian Simper (NDA), Martin Walkingshaw (LLWR), Rebecca Weston (Sellafield) and Andrew White (Wood).
Industrial Strategy Nuclear Sector Deal

National Decommissioning and Waste Management Pipeline Process

Through strong leadership and collaboration across the sector, we’ve completed a joint review of decommissioning and waste management plans that has resulted in delivery of the first ever UK Pipeline.

The establishment of a Pipeline for the first time gives a single point of reference and visibility to bring together decommissioning and waste management plans for the future. The data and information will encourage organisations to participate in dialogue to understand, identify and unlock significant opportunities for the UK economy, reduce barriers to entry for the supply chain, create jobs and drive focused innovation.

The journey of developing and issuing the Pipeline has been one of transformation. From the first workshop to the last, there was a fundamental change in approach and understanding of the value of the Pipeline. The journey also highlighted how, if we work together as a sector, we can identify and drive significant economic value for the UK.

The scope of this work includes all significant current and future decommissioning and waste management projects, covering:

- Civil nuclear
- Defence
- Naturally Occurring Radioactive Material (NORM) from the oil and gas sector
- There is still more work to be done with the other sectors (e.g. medical and research)

The core team included: Jay Bhart (seconded to Nuclear AMRC), Daniel Braund (SL), Keith Duncan (BEIS), Jessica Hollingworth (Cavendish Nuclear Ltd.) and Emily James (BEIS).

The data and information collected from the various organisations cover a period up to 2040. Although not exhaustive, the pipeline covers all the current and planned critical and high priority programmes, projects and activities that could support the identification of opportunities to meet the 20% cost reduction target by 2030.

In order to meet the NSD milestone, a core team was set-up with autonomy to work with government and industry to obtain the data required to develop the Pipeline. Engagement with different organisations from the sector took the form of workshops in which Terms of Reference (TOR), measures of success, format and content of the Pipeline were agreed and established. Attendance at the workshops comprised of representatives from across government, regulators, industry and the supply chain.

Representatives from each of these organisations took an active role in presenting data and information on their respective decommissioning and waste management projects. Each of these contributions prompted constructive debate which led to the identification of new synergies and commonalties across programmes; newly identified despite the long-standing careers of representatives. This shows the added value of bringing stakeholders together in one place.

This work does not analyse data and information collected for opportunities even though some obvious quick wins could be easily identified. Also the data and information collected does not take into account of any export opportunities. These actions will form part of the recommendations for the next phase of work.

The data and information collected is expected to change over time as priorities shift. It is expected that factors such as budgetary changes, delivery performance and political influence/environment will have an impact on this data over time.

However, this data and information provides a strong foundation for the UK to better understand and influence strategy, budgets and approaches that delivers significant value. The ambition is that this information can provide industry and the supply chain with the visibility required to increase confidence in the market to encourage investment of capabilities, and in identifying new and innovative approaches to deliver.
For example a UK approach to stored uranics or further sharing of civil and defence expertise and/or sharing of nuclear and non-nuclear supply chain expertise.

One of the key challenges addressed in this work was the standardisation of terminology across participating organisations and sectors. This work shows that having a national standardisation of terminology in relation to decommissioning will help to reduce complication, misunderstanding and confusion in the market.

The data and information gathered gives an insight into the key nuclear decommissioning and waste management programmes, projects and activities in progress or planned for the future.

Due to the complex structure of the organisations involved, the large variation in sites, programme and projects, a three tier approach was developed to group the data and information.

Here follows a short description of each level:

- **Level 0** – Gives a programme perspective by organisations start and finish time to put into context the long duration of these programme (see diagram on page 6)

- **Level 1** – Breaks down the organisations into sites and major programme with the key phases within the programmes (see diagrams from page 7 to 15)

- **Level 2** – Takes the level 1 data and information and breaks it down into individual activities within each site

All of the above information has been integrated into a Geographic Information System (GIS) to support the analysis of the Pipeline.

The Pipeline can be developed much further to include waste inventory levels and forecasts, and skills required for projects.

This work will be continued by the Legacy Cost Reduction Working Group to analyse and develop business cases to deliver cost savings and other associated benefits like developing UK capability or research and development solutions for the export market.
## Nuclear Sector Organisations

<table>
<thead>
<tr>
<th>Year</th>
<th>Organisation</th>
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<tbody>
<tr>
<td>2000</td>
<td>Dounreay Site Restoration Ltd.</td>
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<tr>
<td>2001</td>
<td>Low Level Waste Repository</td>
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<tr>
<td>2002</td>
<td>Magnox Ltd.</td>
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<tr>
<td>2003</td>
<td>Radioactive Waste Management</td>
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<tr>
<td>2004</td>
<td>Sellafield Ltd.</td>
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<tr>
<td>2005</td>
<td>Advanced Gas-cooled Reactor</td>
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<tr>
<td>2006</td>
<td>Decommissioning</td>
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<tr>
<td>2007</td>
<td>Atomic Weapons Establishment</td>
</tr>
<tr>
<td>2008</td>
<td>HMS Vulcan</td>
</tr>
<tr>
<td>2009</td>
<td>Small Modular Reactor</td>
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<tr>
<td>2010</td>
<td>Cypress</td>
</tr>
<tr>
<td>2011</td>
<td>Advanced Gas-cooled Reactor</td>
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<tr>
<td>2012</td>
<td>Work in progress</td>
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</tbody>
</table>

## Other Sectors

<table>
<thead>
<tr>
<th>Year</th>
<th>Sector</th>
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<tbody>
<tr>
<td>2000</td>
<td>Medical (Human Diagnostics &amp; Treatment)</td>
</tr>
<tr>
<td>2001</td>
<td>Oil and Gas</td>
</tr>
<tr>
<td>2002</td>
<td>Research Facilities</td>
</tr>
<tr>
<td>2003</td>
<td>Ministry of Defence</td>
</tr>
<tr>
<td>2004</td>
<td>Advanced Gas Reactor</td>
</tr>
<tr>
<td>2005</td>
<td>Nuclear Decommissioning</td>
</tr>
</tbody>
</table>

## Work in progress

- Dounreay Site Restoration Ltd.
- Low Level Waste Repository
- Magnox Ltd.
- Radioactive Waste Management
- Sellafield Ltd.
- Advanced Gas-cooled Reactor
- Atomic Weapons Establishment
- HMS Vulcan
- Small Modular Reactor
- Cypress
- Advanced Gas-cooled Reactor
- Work in progress

## Key

- Oil and Gas
- Commercial Nuclear
- Ministry of Defence
- Advanced Gas Reactor
- Nuclear Decommissioning

## National Decommissioning and Waste Management Pipeline - Level 0

- Work in progress
- Dounreay Site Restoration Ltd.
- Low Level Waste Repository
- Advanced Gas-cooled Reactor
- Atomic Weapons Establishment
- HMS Vulcan
National Decommissioning and Waste Management Pipeline - Level 1

Nuclear Decommissioning Authority Programmes

Dounreay

Dounreay Fast Reactor
Shaft and Silo
Fuel Cycle Area (all buildings)
Waste Facilities
Prototype Fast Reactor

KEY
- Defueling
- Demolition
- Dismantle and Displant
- Reactor Buildings
- Design and Build
- Operations
- Decommissioning Operations
- Post Operations Cleanout
Advanced Gas-cooled Reactor Site Decommissioning Programmes

- Dungeness B
- Hartlepool
- Hunterston B
- Hinkley Point B
- Heysham 1
- Heysham 2
- Sizewell B (PWR)
- Torness

**KEY**
- Green: Pre-closure planning
- Blue: Defuelling
- Light Green: Deconstruction/prep for C&M
- Yellow: Care and Maintenance
Ministry of Defence Programmes

- HMS Vulcan Decommissioning
- Submarine Dismantling Project
- AWE Facility Decommissioning
- AWE Conventional Dismantling
- AWE Hub Enabling/Demolition
- AWE Removal of Primary Containment
- AWE Future Site Decommissioning
Commercial Programmes

KEY
- Operations
- Post Operational Cleanout
- Decommissioning
- Surveillance and Maintenance

Westinghouse
Springfields Fuels Ltd

Urenco
The Energy to Succeed
Geographic Information System

A Geographic Information System (GIS) is a system designed to capture, store, manipulate, analyse, manage, and present all types of geographical data.

We chose to use GIS to present the data collated as it will effectively display the decommissioning activities in totality and geographically at any given time (2019 - 2040+). It will also allow the sector to identify and analyse synergies and/or commonalities between programmes which could prompt more efficient and cost effective ways of working.

The data and information collated in the GIS is the first step in developing a more comprehensive tool that will help highlight opportunities and innovative solutions which will assist the sector in achieving our commitment of 20 per cent reduction in decommissioning costs.

We are very grateful to colleagues at Sellafield Ltd who volunteered to develop the GIS tool for the Pipeline. The tool can be accessed from the Nuclear Industry Association (NIA) website, whose assistance has been valuable throughout the duration of this work.

Both organisations have provided resource, technical knowledge and a collaborative approach which is exemplary of the behaviors encouraged by the Nuclear Sector Deal.

Visit www.niauk.org/industry-issues/nuclear-sector-deal to access the GIS tool. A ‘How to Guide’ can be found in Appendix A.
Recommendations

The Decommissioning Pipeline Core Team have completed their task/milestone of producing the national decommissioning and waste management Pipeline.

This Pipeline can now be used as a foundation on which to launch further work that will assist in identifying and meeting the targets for the Nuclear Sector Deal in particular meeting a 20% reduction in decommissioning costs by 2030. In taking forward this further work and next steps the Core Team recommends:

Pipeline development

i. Further work is required to continue engagement with the following organisations to obtain data and information to populate the Pipeline at all three levels and subsequently the GIS tool. This will give a total/complete view of the UK’s decommissioning and waste management endeavours:

   a. Cyclife
   b. Hinckley Point C
   c. Medical
   d. Oil and Gas sector
   e. SMR/AMR
   f. Wylfa New Build
   g. UKAEA

ii. The Pipeline and GIS master data and information to be held and managed by the NSD Programme Management Office in order to manage any changes and communications of any changes.

iii. Collect additional data and information from providers on project confidence levels, potential budgets, resource requirements (skills) and key capability requirements.

iv. Further development of standard language and terminology for decommissioning and waste management.

v. The decommissioning Pipeline is updated annually as a minimum by the NSD Programme Management Office.

Analysis of Pipeline

vi. Working group to support the further development of Pipeline and analysis of the Pipeline:

   a. Looking for commonality across sites and programmes
   b. Synergies from a portfolio approach (e.g. Advanced Gas-cooled Reactors & Magnox)
   c. Innovative solutions and focus R&D budgets on priority areas
   d. Areas of potential cost savings (hotel costs, transport, storage etc.)

vii. Identification of current projects and activities that are already in progress and which are part of commercial frameworks.

viii. Identify any grand challenges and activities that are already taking place by organisations and link to Pipeline if appropriate.

General

ix. Engage with all other working groups and share Pipeline data and information and establish working relationships to look at how this Pipeline data and information can be used to maximize value.

x. Establish and deliver a NSD stakeholder and communications strategy to be run by NSD Programme Management Office.
Appendix A - GIS How to Guide

This is a Geospatial tool built on the ArcGIS Online platform. If you have used Google Maps or similar “slippy maps” in the past then this tool should be fairly familiar.

The NSD GIS tool makes it easy to filter information

Enter text in the Tag Search to find activities

Filter by activity start and end date

Graphs update for the unfiltered activities

Select a site to get a list of activities

Filter by dragging and zooming the map, to show only the facilities of interest

The tool has been set up to include nuclear sites in the UK, and some information about work planned until 2040.

There are over 500 activities included, so it is intended that filtering of the data is used to allow useful insights to be obtained.

The tool allows the information displayed on the map and charts to be filtered by entering text into the “Tag Search” box and selecting matches, by filtering start and/or end dates for activities, by scrolling and zooming the map to only show locations of interest, or by manually selecting facilities, using the toolbox in the top left corner of the map.
As an example, let us investigate sites carrying out defueling during the period 2022 – 2025. Start with the tool open:

Filter for defueling jobs by typing “Defueling” in the “Tag Search” box:

Observe that the graphs and the map have removed activities that do not involve defueling.

Now filter for activities starting between 2022 and 2025:

This leaves us 6 activities, and by clicking on the dot for Hartlepool, we can see that the Defueling operations there are planned to run from 2023 – 2027.
A number of organisations covering decommissioning, waste management and related activities have contributed to this work. The data and information provided has been critical to developing the pipeline and without the data provider’s valuable input, support and involvement, this would have not been possible. This section provides an overview of each organisation and any specific caveats associated with its data.

In collating this data there are both general commercial and timing uncertainties with regards to decommissioning activities and budgets.

The general commercial sensitivities have been dealt with by the core team in a number of ways dependent on the information, including:

- Publish or bring forward publication of information so that it is in the public domain
- Share information more widely if necessary so there is a level playing field
- Anonymise the information
- Communicate what information the Core Team has access to
- Share information more widely if necessary so there is a level playing field
- Anonymise the information
- Communicate what information the Core Team has access to

With regards to the general time uncertainties, the best available data and information has been used.

Any specific caveats pertinent to individual organisations will be covered below.

**Atomic Weapons Establishment (AWE)**

AWE is responsible for the design, manufacture and support of warheads for the United Kingdom’s nuclear weapons. It is the successor to the Atomic Weapons Research Establishment (AWRE) with its main site on the former RAF Aldermaston and has major facilities at Burghfield, Blacknest and RNAD Coulport. AWE plc, responsible for the day-to-day operations of AWE, is owned by a consortium of Jacobs Engineering Group, Lockheed Martin UK and Serco through AWE Management Ltd, which holds a 25-year contract (until March 2025) to operate AWE. All the sites are owned by the Government of the United Kingdom which has a golden share in AWE plc.

AWE have provided decommissioning information for facilities on their sites that they plan to decommission. Facility descriptors and detail of plant and equipment have been removed for security reasons.

**Dounreay Site Restoration Ltd**

Dounreay Site Restoration Ltd (DSRL) is the SLC responsible for the clean-up and demolition of the Dounreay nuclear site and operates under contract to the NDA. DSRL provided information about programmes of work being undertaken to decommission the Dounreay Fast Reactor and Prototype Fast Reactor, Shaft and Silo, including indicative dates for major phases of work and expected waste arisings. It also provided limited information about upcoming procurements.

The data was provided with the caveat that the Dounreay Performance Plan is currently going through a major review and update and as such all dates are subject to change.

**EDF Energy**

EDF Energy is an integrated energy company which operates seven Advanced Gas Reactor (AGR) nuclear power stations, and one Pressurised Water Reactor (PWR), across the UK. The Nuclear Liabilities Fund (NLF) is a segregated fund established to pay for the decommissioning costs of the UK’s fleet of AGR and PWR nuclear reactors. EDF Energy provided its plans for decommissioning the AGR fleet of nuclear reactors in accordance with its latest Baseline Decommissioning Plans from 2016. One plan was provided for each site, and included information about specific programmes of work. Indicative dates were given for key phases of work such as defueling and the care and maintenance period. EDF Energy provided written descriptions of detailed activities within each phase of work, for example when new electrical supplies would need to be installed, and new facilities constructed to facilitate decommissioning.

EDF Energy specified a number of caveats on the data set it provided as part of the pipeline, which are as follows:

- The data presented is based on EDF Energy’s Baseline Decommissioning Plan 2016 (BDP 16) and as such represents a programme prepared for provisioning purposes rather than an executable plan.
- BDP 16 assumes a single station closure date (the Scheduled Closure date) which is defined for accounting and legal reasons. Actual closure dates are likely to vary depending on fuel cycles and any potential for life time extension.
- EDF Energy is continuing to develop its baseline decommissioning plans and an executable version will be prepared in good time for actual decommissioning.
- The data does not represent all of the activities on site at level 2, but rather has been prepared to illustrate the critical path and those activities where the supply chain is likely to be more closely involved.
- At this stage in the development of the BDPs, the precise breakdown between “make” and “buy” in executing the work has yet to be fully determined.
- Financial data is not provided as this is commercially sensitive to EDF Energy.
- Manpower data is not provided as this is commercially sensitive to EDF Energy.

**Low Level Waste Repository (LLWR)**

LLWR is responsible for managing the national Low Level Waste Repository in West Cumbria on behalf of the Nuclear Decommissioning Authority (NDA) and overseeing a National Low Level Waste Programme to ensure lower activity waste is managed effectively across the UK.

The Repository site is the nation’s principal disposal facility for LLW and is the only facility permitted to receive all categories of low level waste (LLW). The LLWR site receives low level solid waste from a range of customers, such as the nuclear industry, the MOD, non-nuclear industries, educational, medical and research establishments.

The information provided by LLWR Ltd is based on LTP (Life Time Plan) 2018 and current scope in NDA Client Specification. Vault build programme uses data from the UKRWI and makes assumptions about diversion rates.
Magnox Ltd
Magnox Ltd is a Site Licensed Company which operates under contract to the Nuclear Decommissioning Authority (NDA). Magnox Ltd is responsible for decommissioning the three Magnox nuclear reactors across the UK, which have all now ceased electricity generation. Magnox Ltd provided information about its plans for decommissioning those ten sites at programmable level. Information was provided about major phases of work with indicative dates attached to each.

Magnox Ltd has provided the data with the caveat that it is true as of January 2019, but is already changing due to internal rescheduling and is likely to change further. It has also indicated future plans for decommissioning are heavily dependent on the outcome of the Spending Review which will be released later in 2019.

Ministry of Defence
The Ministry of Defence (MOD) is responsible for the decommissioning of the Vulcan Naval Reactor Test Establishment at the Dounreay site, and for the Submarine Dismantling Programme. Defence Nuclear Organisation, on behalf of MOD, provided dates for key activities within these two decommissioning programmes. Information relating to removals of waste, facility decontamination, demolition and care and maintenance periods was provided along with expected dates for each activity. Dates given for the Submarine Dismantling Programme are based on one boat, and further work could be done to extend this to the other boats at a later stage. Data which identifies specific boats or facilities is classed as sensitive and is not given. MOD provided the data with the caveat that information about costs for individual programmes of work, and data about operational programmes have not been provided.

Nuclear Decommissioning Authority
The NDA are required under the Energy Act 2004 to decommission and clean-up designated nuclear sites, as well as the operation of designated facilities for the disposal of radioactive and hazardous material. The NDA’s budget has been maintained at around £3bn a year which enables the NDA to continue to make progress on decommissioning with the focus being on tackling the highest hazards at Sellafield. The NDA’s budget is drawn from a combination of direct Government funding as well as income generated from reprocessing, spent fuel management and transport operations.

Sellafied Ltd
Sellafied Ltd (SL), a subsidiary of the NDA, is the SLC responsible for the decommissioning of the Sellafied facility in Cumbria including the Calder Hall reactors. Sellafied is recognised as the UK’s largest and most complex nuclear site. There are 20 work programmes and over 600 individual projects within those programmes. The importance of the task is reflected in the NDA’s funding which has remained at around £3 billion a year; this will allow NDA to deliver its vital mission with a particular focus on tackling the highest hazards at Sellafield – the legacy ponds and silos. SL provided detailed information about all of its decommissioning programmes including:
- Thermal Oxide Reprocessing Plant (THORP)
- Advanced Gas Reactor Programme
- Pile Fuel Storage Pond and Cladding Silo
- First Generation Magnox Storage Pond
- Magnox Swarf Storage Silo
- Magnox Programme
- Special Nuclear Materials Programme
- High Active Liquors
- High Level Waste Plant
- Site Remediation Programme
- Balance of Site
- Calder Hall

SL included dates for key phases of work for all of these programmes to a high level of detail, including information about operations, post operational cleanout, building refurbishments, waste treatment and waste packaging.
- This assumes funding from Spending Review 19 (SR19) slightly higher than existing levels.
- The projects will be subject to thorough optioneering and may change.
- A number of projects are planned on the assumption that the GDP is available in the 2040s.
- The Programme and Projects Partners (PPP) model is now in place and will deliver all major projects over the next 20 years.
- Aspects of the Sellafield data have ambition built within it. As analysis and challenge is carried out across the bigger picture it will show where the ambition exists.

URENCO UK
The Capenhurst site is operated by the SCL Urenco Nuclear Stewardship Ltd, owned by URENCO UK Ltd. Capenhurst is home to three uranium enrichment plants. URENCO Ltd provided high level information about NDA contracts, MOD contracts and work with Urenco UK and Urenco Nuclear Stewardship. The information provided included dates for key phases of work including operations, decommissioning, design and build of structures to facilitate decommissioning, and care and maintenance periods. Further information about detailed activities and associated costs was not provided.

Urenco Ltd provided the data with the caveats that all NDA and MOD work is covered by existing agreements, and Urenco UK decommissioning is in the early stages and only initial funding has been approved. Some activities are at the business development stage and have not yet been approved. They also indicated that the dates for the design and build of the uranium hexafluoride re-container facility were indicative only.

Westinghouse
The Springfields site is operated by the SLC Springfields Fuels Ltd, which is owned by Westinghouse Electric UK Ltd. The Springfields site is responsible for manufacturing nuclear fuel for all major designs of nuclear reactor, and meets most of the UK’s nuclear fuel requirements. As well as manufacturing fuel, Springfields run uranium recovery services and decommissioning services. Westinghouse provided high level information about the decommissioning of the Magnox Island, Uranium Hexafluoride (UF6) Conversion, and Oxide Fuels facilities. Information was provided about major phases of work with indicative dates including operations, post operational cleanout, decommissioning and surveillance and maintenance periods. Information about costs was not provided.

Westinghouse provided this information with the caveat that the Springfields site is a commercial operating site, and although there are decommissioning activities in progress the site purpose is to continue commercial operations. It also stated the Oxide Fuels facility is shown as an operational facility into the future with a key assumption being that Westinghouse maintains commercial fuel contracts. The Hex (uranium hexafluoride) Business assumed a period of surveillance and maintenance until a commercial contract for hex conversion is secured, after which the plant will return to operations.
The Nuclear Industry Association (NIA) is the trade association for the civil nuclear industry in the UK, representing more than 250 companies across the supply chain. The diversity of NIA membership expertise in new build, management and decommissioning enables effective and constructive industry-wide interaction.

niauk.org/industry-issues/nuclear-sector-deal