

**Nuclear Decommissioning Authority**

# **Business Plan**

## **2013 - 2016**

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## **2013 - 2016**

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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.

March 2013



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## **Our mission is to:**

**Deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean-up and waste management. This means never compromising on safety or security, taking full account of our social and environmental responsibilities, always seeking value for money for the taxpayer and actively engaging with stakeholders.**



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## Foreword



When I was appointed as CEO in April 2012 I was clear that Sellafield would attract the main attention of myself and the NDA as a whole. At Sellafield our priorities are to ensure the site remains safe and secure and to make demonstrable progress in tackling the high hazard legacy facilities on the site.

I welcome the NAO report on Managing risk reduction at Sellafield and the subsequent report from the Public Accounts Committee. We are currently incorporating the recommendations from both reports into our future plans to bring about further improvements.

2013/2014 is the final year of the first contract term for Sellafield under the ownership of Nuclear Management Partners Limited (NMPL). Much has been achieved but there is more to do. In the early part of the year we will be concluding our deliberations on the optimum way forward for the next phase.

While Sellafield remains our prime focus area, we are also intent on ensuring that the rest of our estate receives appropriate attention. I hope you will see from this Business Plan that we have allocated resource suitably across all of our sites.

This year has seen the arrival of Babcock Dounreay Partnership (BDP) at our site in Caithness. They have brought in a new plan which has the potential to deliver Dounreay into its Interim State between the years of 2022-2025 and to make possible savings of more than £1 billion compared to the previous plan. We have also seen the transfer of our Capenhurst site to URENCO UK Ltd. This, following the earlier sale of Springfields Fuels Ltd to Westinghouse, is another example of us seeking the best future for our sites while minimising future liabilities to the tax-payer. We have also concluded the negotiations with UK Nuclear Waste Management Limited (UKNWM) that will see them continue to manage the Low Level Waste Repository (LLWR) and estate Low Level Waste (LLW) optimisation for the next five years.

A key activity for the coming year is the competition for future ownership of Magnox and RSRL. With excellent support from Government, Regulators and the Site Licence Companies (SLCs) we are able to run the competition based on both the Magnox Optimised Decommissioning Programme (MODP) (*ref 1*) and the developing Research Sites Restoration Limited (RSRL) Optimised Plan and we expect to see further improvements to plans, performance and costs delivered through the competition process. The Magnox Operating Programme (MOP9) (*ref 2*) has recently been revised and updated and, while challenges exist around Magnox reprocessing rates at Sellafield, we are working to ensure that the plan remains deliverable.

We have responsibility for planning and ultimately implementing geological disposal of higher activity wastes in accordance with Government policy. This includes ensuring such wastes generated throughout the UK are conditioned and packaged in a manner suitable for eventual disposal. This is being delivered through our Radioactive Waste Management Directorate (RWMD) which will need, at an appropriate time, to become a separate legal entity. We will continue to support Government in its Managing Radioactive Waste Safely (MRWS) programme.

The 20 year look ahead linking the Business Plan to longer term aims presented in last year's plan was well received. On page 13 you will see that the picture has been updated with a link to key targets within the Key Activities section of the plan. We now have a clearer understanding of the critical path activities in achieving our outcomes, underpinned by the targets set out within the SLC sections.

In response to comments on last year's plan we have included an overview of how our strategy and suite of plans fit together and how performance against these plans can be tracked. In essence, the year's targets and planned outcomes are detailed in the Business Plan, progress is available quarterly on our website and year end performance is reported in the Annual Report and Accounts (ARAC).

I hope you find this Business Plan informative and useful.

A handwritten signature in black ink, appearing to read 'John Clarke'. The signature is fluid and cursive, written over a white background.

**John Clarke**  
Chief Executive

# Introduction

This Business Plan sets out our key objectives and plans for delivering our priorities over the next three years.

## Our remit

The NDA is a Non-Departmental Public Body (NDPB) set up under the Energy Act 2004 (ref 3) to ensure that the UK's 19 designated civil public sector nuclear sites are decommissioned and cleaned up safely and efficiently.

The Secretary of State for the Department of Energy and Climate Change (DECC) approves our Strategy and Annual Plans in consultation with Scottish Ministers as required by the Energy Act (ref 3). The NDA Board is responsible for delivery. The Government holds us to account for performance against our Strategy and Plans. Shareholder Executive (ShEx) work very closely with Government acting as an agent for the DECC in the financial governance of the NDA.

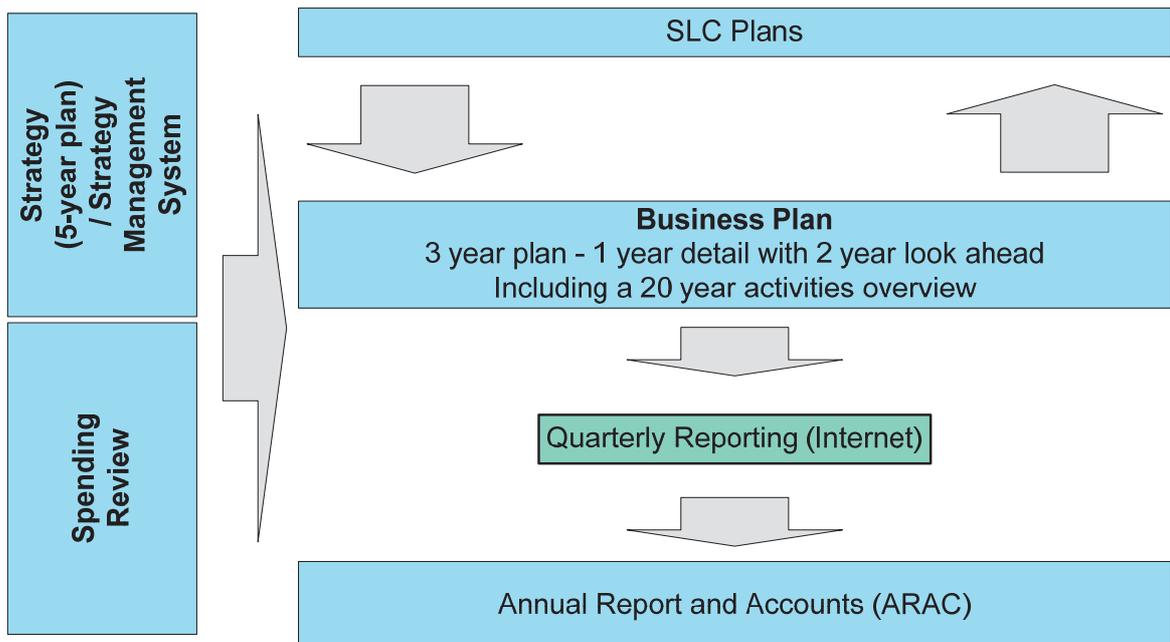
DECC and the Scottish Government have a target to make tangible progress in decommissioning and clean-up. This is demonstrated by a reduction in the UK civil nuclear liabilities and of the risks associated with high hazards (by progressively mitigating hazards and ensuring radioactive waste continues to be put into a passively safe form). Progress on these activities is reported in our ARAC.

## Delivery of the mission

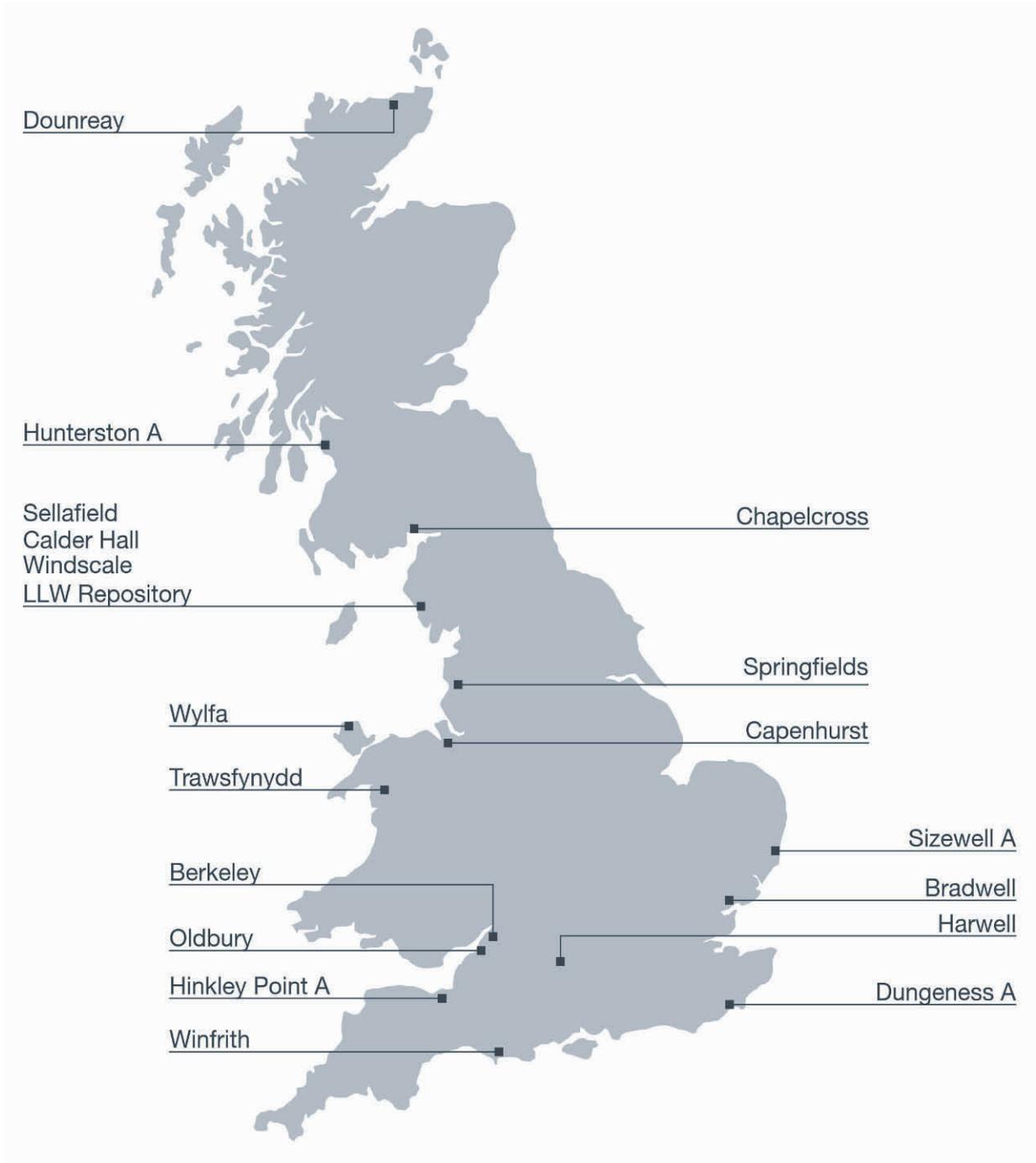
Each of our 19 sites is operated by one of seven SLCs under contract to the NDA. SLCs are responsible for day-to-day operations and the delivery of site programmes. Parent Body Organisations (PBOs), selected through a competitive process, bring private sector expertise and own the SLCs for the duration of their contract with the NDA.

## NDA Plans

The diagram below provides an overview of the NDA Planning and Reporting process. SLC's formulate their plans on what we set out in the Strategy and the budget allocated in the Spending Reviews. Activities for each site are detailed in the NDA Business Plan. The activities are reported on a quarterly basis on our website, with the year end performance reported in the ARAC.



# NDA Sites Location Map



## Our Funding

### **Funding Framework**

The NDA is publicly funded with part of this financing coming from the income it generates from its commercial activities. Our total planned expenditure is voted upon annually by Parliament.

### **Government Funding**

The last Spending Review secured outline funding for four years (April 2011 to March 2015).

### **Commercial Income**

Our commercial operations fall broadly into two areas:

- electricity generation and associated trading
- spent fuel and nuclear materials management, including reprocessing

The nature of our commercial activities means that we have to manage a significant degree of income volatility, largely due to our operations relying on ageing assets and infrastructure, Wylfa, for example, is over 40 years old. Furthermore, this income will decline in future years as plants close and enter decommissioning.

Our objective is to maximise revenue from our existing assets and operations to help fund decommissioning and clean-up, thereby reducing the burden on the UK taxpayer. To achieve this we will include optimised income from electricity generation, leasing property and selling land and other assets in response to market interest.

### **Prioritisation and Allocation of Funding**

Within affordability constraints, we will seek to maintain progress and maximise value for money by focusing on the highest hazards and risks, whilst ensuring that safe, secure and environmentally responsible site operations are maintained across our estate.

The Spending Review process used criteria drawn from our Value Framework to evaluate options. These criteria, Affordability (short, medium and long-term), Value for Money, Safety and Environmental Impact, Deliverability, Socio-Economic and UK Government Policy Impact, will inform the management decisions to be taken in the process of allocating available funding over the Business Plan period.

### **Planned Income and Expenditure in 2013/2014**

This Business Plan sets out our anticipated income and expenditure for 2013/2014 in line with the settlement agreed in the 2010 Spending Review.

Our total planned expenditure for 2013/2014 is £3.2 billion, of which £2.3 billion will be funded by UK Government and £0.9 billion by income from commercial operations. Planned expenditure on site programmes will be £3 billion, while non-site expenditure is expected to be £0.2 billion. This non-site expenditure includes skills development, socio-economic, Research & Development (R&D), insurance and pension costs, fees to SLCs, implementing geological disposal and NDA operating costs as detailed on page 9.

## Planned Income and Expenditure Summary

| £m  |                                | Decom & Clean-up Costs | Total Operations Running Cost | Capex        | 2013/14 Plan   | 2012/13 Plan   |
|---|--------------------------------|------------------------|-------------------------------|--------------|----------------|----------------|
| SLC/Subsidiaries/Sites                    |                                | A                      | B                             | C            | Total (A+B+C)  | Total          |
| Magnox Ltd                                | Berkeley                       | 71.8                   |                               |              | 71.8           | 54.6           |
|   | Bradwell                       | 116.1                  |                               |              | 116.1          | 82.3           |
|   | Chapelcross                    | 51.2                   |                               |              | 51.2           | 53.1           |
|   | Dungeness A                    | 36.2                   |                               |              | 36.2           | 41.4           |
|   | Hinkley Point A                | 45.3                   |                               |              | 45.3           | 35.1           |
|   | Hunterston A                   | 32.3                   |                               |              | 32.3           | 31.9           |
|   | Magnox Support Office          | 52.2                   |                               |              | 52.2           | 58.5           |
|   | Oldbury                        | 59.7                   |                               |              | 59.7           | 77.8           |
|   | Sizewell A                     | 35.8                   |                               |              | 35.8           | 39.6           |
|   | Trawsfynydd                    | 62.6                   |                               |              | 62.6           | 77.7           |
|   | Wyfa                           |                        | 87.3                          | 0.5          | 87.8           | 89.0           |
| Electricity Trading                       | Electricity Trading            |                        | 65.0                          |              | 65.0           | 79.6           |
| Research Sites Restoration Ltd            | Harwell and Winfrith           | 65.0                   |                               |              | 65.0           | 59.6           |
| Dounreay Site Restoration Ltd             | Dounreay                       | 175.0                  |                               |              | 175.0          | 161.0          |
| Sellafield Ltd                            | Sellafield                     | 788.3                  | 706.0                         | 265.7        | 1,760.0        | 1,649.3        |
| LLWR Ltd                                  | LLWR                           | 33.0                   |                               |              | 33.0           | 30.0           |
| Springfields Fuels Ltd                    | Springfields                   | 53.0                   |                               |              | 53.0           | 41.9           |
| Capenhurst                                | Capenhurst                     | 21.0                   |                               |              | 21.0           | 18.0           |
| Nuclear Transport and Contract Management | International Nuclear Services |                        | 157.6                         | 1.4          | 159.0          | 145.0          |
| Non site expenditure                      |                                | 185.0                  |                               |              | 185.0          | 177.1          |
| <b>TOTAL</b>                              |                                | <b>1,883.5</b>         | <b>1,015.9</b>                | <b>267.6</b> | <b>3,167.0</b> | <b>3,002.5</b> |
| <b>Income</b>                             |                                |                        |                               |              | <b>887.0</b>   | <b>716.5</b>   |
| <b>Net</b>                                |                                |                        |                               |              | <b>2,280.0</b> | <b>2,286.0</b> |

Notes:

- Numbers may not cast due to rounding
- Final Annual Site Funding Limits issued in March 2013 may be adjusted to reflect efficiency performance and portfolio pressures. The NDA reserves the right to reallocate funding to meet prioritised programme needs.

| Summary NDA SR10 Funding | 2011/12 £ M | 2012/13 £ M | 2013/14 £ M | 2014/15 £ M |
|--------------------------|-------------|-------------|-------------|-------------|
| Income                   | 948         | 717         | 887         | 873         |
| Government funding       | 1,941       | 2,286       | 2,280       | 2,152       |
| Expenditure              | (2,889)     | (3,003)     | (3,167)     | (3,025)     |
| <b>Net</b>               | <b>0</b>    | <b>0</b>    | <b>0</b>    | <b>0</b>    |

## 2013/2014 Breakdown of Planned Non site Expenditure

| Non site expenditure                     | 2013/14      | 2012/13      |
|--|--------------|--------------|
|  | Plan<br>£ M  | Plan<br>£ M  |
| NDA operating costs                      | 48.0         | 46.8         |
| Radioactive Waste Management Directorate | 21.0         | 19.7         |
| Socio Economic, Skills, R&D, Knowledge   | 31.0         | 27.4         |
| Insurance                                | 12.0         | 12.0         |
| Contractor fees                          | 73.0         | 71.2         |
| <b>Total</b>                             | <b>185.0</b> | <b>177.1</b> |

## 2013/2014 Breakdown of Planned Income by Category

| Income Source                             | 2013/14      |
|---|--------------|
|   | Plan<br>£ M  |
| Reprocessing and fuel management services | 632.5        |
| Electricity Generation                    | 104.0        |
| NDA - INS Transport                       | 69.5         |
| Intra site services                       | 81.0         |
| <b>Total</b>                              | <b>887.0</b> |

## Key Activities within Strategic Themes

The reference indicators within the key activities below are shown on the 20 year overview on page 13.

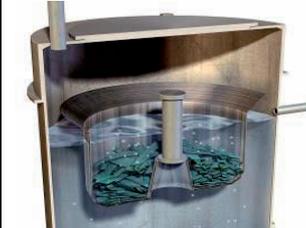
### Site Restoration (SR)



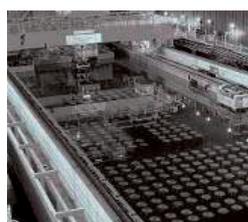
**Objective - To restore our designated sites and release them for other uses.**

Our priority within this theme is to remediate intolerable risks in the Legacy Ponds and Silos (LP&S) at Sellafield. We will also decommission redundant facilities at Sellafield whilst maintaining, and, as appropriate, upgrading the infrastructure and capability across the site to sustain the operations of key supporting plants and services. Across the rest of the estate we will place Magnox reactors into Care and Maintenance, deliver Dounreay site to an Interim State and take Harwell and Winfrith to site closure.

#### Key activities for the year 2013/2014 are as follows:

|   |   |   |  |
|---|---|---|--|
|                           |                                   |    |  |
| <b>SLC: Sellafield</b> <b>A</b>   | <b>SLC: Sellafield</b> <b>B</b>   | <b>SLC: Magnox</b> <b>J</b>   | <b>SLC: Magnox</b> <b>J</b>  |
| <b>Programme: LP&amp;S Pile Fuel Storage Pond</b><br>Complete the export of canned fuel from the pond floor | <b>Programme: LP&amp;S First Generation Magnox Storage Pond –</b><br>Installation of the pipe bridge over wall unit | <b>Programme: MODP Bradwell –</b> Continue the retrieval of Fuel Element Debris (FED) | <b>Programme: MODP Trawsfynydd –</b> Commence retrieval and encapsulation of the FED |

### Spent Fuels (SF)



**Objective - To ensure safe, secure and cost-effective lifecycle management of spent Magnox, spent Oxide and spent Exotic fuels.**

We will manage all spent Magnox fuel and place all Exotic fuels into a final disposition form. On Oxide fuels, we will continue to receive and manage fuel from EDF Energy, thereby supporting the operation of the UK's Advanced Gas-Cooled Reactor (AGR) power stations, and seek to optimise value from our spent fuel management contracts.

#### Key activities for the year 2013/2014 are as follows:

|   |  |   |
|---|--|---|
|    |                    |        |
| <b>SLC: Dounreay &amp; Sellafield</b> <b>K</b>  | <b>SLC: Magnox</b> <b>C</b>  | <b>SLC: Sellafield</b> <b>F</b>   |
| <b>Programme: Dounreay Optimisation</b><br>Continue removal and transport of Dounreay Fast Reactor (DFR) breeder fuel to Sellafield for reprocessing. | <b>Programme: Metal Fuels (MOP)</b><br>Reprocess Magnox fuel and DFR fuel in line with the MOP (ref 2) | <b>Programme: Oxide Fuels</b><br>Continue to receive and reprocess AGR fuel from EDF Energy |

## Nuclear Materials (NM)



**Objective - To ensure safe, secure and cost-effective lifecycle management of our nuclear materials.**

### Key activities for the year 2013/2014 are as follows:

|   |  |
|---|--|
|  |                 |
| <b>SLC: RSRL, Sellafield &amp; NDA</b> <b>D</b>                                   | <b>NDA</b> <b>E</b>  |
| Implementation of a programme for the transfer of nuclear materials               | Continue to support the development of Government policy for the management of nuclear materials |

## Integrated Waste Management (IWM)



**Objective - To ensure that wastes are managed in a manner that protects people and the environment, whilst complying with UK Government and Scottish Government policies and providing value for money.**

The NDA has been given responsibility for planning and implementing geological disposal in accordance with UK Government policy. We will continue to work with Government to implement the MRWS process, working with interested communities and other stakeholders.

### Key activities for the year 2013/2014 are as follows:

|   |   |   |
|---|---|---|
|                                |    |                 |
| <b>SLC: Sellafield</b> <b>G</b>   | <b>SLC: Magnox &amp; LLWR</b> <b>H</b>  | <b>SLC: Magnox</b> <b>J</b>   |
| <b>Programme: High Level Waste Management</b><br>Continued delivery of Highly Active Liquor (HAL) stock reduction | <b>Programme: Low Level Waste</b><br>Delivery of the Magnox and Low Level Waste Repository (LLWR) joint waste management plan for LLW | <b>Programme: MODP</b><br>Continue with retrieval activities in the active waste vaults at Berkeley |

**Business Optimisation (BO)**



**Objective - To create an environment where existing revenue can be secured, and opportunities can be developed against criteria agreed with UK Government and the Scottish Government.**

**Key activities for the year 2013/2014 are as follows:**

|  |   |
|--|---|
|                                       |  |
| <b>SLC: Magnox</b>   | <b>SLC: Magnox</b>  |
| Support to NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal | Continued electricity generation at Wylfa   |

**Critical Enablers (CE)**



**Objective - To provide the stable and effective implementation framework that enables the delivery of our mission.**

The NDA has a responsibility to deliver skills, Research & Development (R&D) and supply chain development, to consider the socio-economic aspects of its programme and to maintain effective stakeholder engagement.

**Key activities for the year 2013/2014 are as follows:**

|   |   |  |   |
|---|---|--|---|
|                  |    |  |    |
| <b>NDA</b>  | <b>J</b>  | <b>NDA</b>   | <b>L</b>  |
| <b>Programme: MODP</b><br>Capture lessons learned (from the lead and learn concept) for other sites | <b>SLC: Sellafield/Magnox/RSRL/LLWR</b><br>Continue to deliver NDA's targeted support and overhead cost savings equivalent to 25% reduction of the original cost base, whilst maintaining the safety and security of the nuclear estate | <b>Programme: Competition</b><br>Continue with the Magnox and RSRL competition       | <b>NDA</b><br>Further develop procurement strategies and policies which aim to deliver at least 20% of the external supply chain spend with Small and Medium Enterprises in line with Government support for the sector |



## Site Summaries

|   |   |
|---|---|
|  <b>Sellafield Ltd</b> | <p>Sellafield Limited is the SLC responsible for the operation of Sellafield (including Calder Hall), and Windscale nuclear licensed sites.</p> |
|   | <p>The current PBO is Nuclear Management Partners Limited (NMPL)</p>  |
|   | <p><b>Planned expenditure for 2013/2014 - £1,760 million</b></p>  |

| <b>Sellafield (incl. Calder Hall and Windscale) - Location: Cumbria, Area: 262 hectares</b>                                       |  |   |
|---|--|---|
|    |   | <p><b>Key Milestones over the Business Plan period -</b><br/> <b>2013-2014</b> - Complete the delivery of a Silo Emptying Machine to Magnox Swarf Storage Silo<br/> <b>2014-2016</b> - Commence sludge retrievals from the First Generation Magnox Storage Pond<br/> <b>2014-2016</b> - Completion of the removal of all metal fuel from the Pile Fuel Storage Pond<br/> <b>2014-2016</b> - Completion of all oxide fuel contracts for overseas customers</p> |
| <p><b>Pile Fuel Storage Pond –</b><br/>Complete the removal of canned fuel signalling the completion of all bulk de-sludging.</p> | <p><b>First Generation Magnox Storage Pond -</b> Sludge will be removed and transferred to new facilities, currently under construction.</p> | <p><b>Status of land -</b><br/>All 262 hectares covered by the nuclear site licence</p>   |

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | <p>The areas of principal focus are the redundant Legacy Ponds and Silo 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. Latterly they have supported the generation from the Magnox power station fleet and are in need of clean-up and decommissioning. The programmes include removal of nuclear fuel, sludges and solid material which require the provision of equipment to retrieve the various wastes and then treat and store them in passive conditions. 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.</p> <p><b>The following activities are key steps in the delivery of these major clean-up programmes:</b></p> |
|                                   | <p><b>Pile Fuel Storage Pond</b></p> <ul style="list-style-type: none"> <li>– complete the export of canned fuel from the pond floor</li> <li>– continue the transfer of metal fuel from the pond for storage</li> <li>– continue removal of contaminated metal for treatment and storage</li> <li>– continue consolidation of sludge from within the pond</li> </ul>   |
|                                   | <p><b>Pile Fuel Cladding Silo Programme</b></p> <ul style="list-style-type: none"> <li>– completion of the access containment door installation</li> <li>– completion of the crane and strand lift installation</li> </ul>  |
|                                   | <p><b>First Generation Magnox Storage Pond</b></p> <ul style="list-style-type: none"> <li>– installation of the pipe bridge over wall unit</li> <li>– continue fuel consolidation and commence pond floor clearance in preparation for installation of sludge recovery systems</li> </ul>   |
|                                   | <p><b>Magnox Swarf Storage Silo</b></p> <ul style="list-style-type: none"> <li>– complete the delivery of a Silo Emptying Machine to site</li> <li>– continue to develop the downstream capability to receive and treat material from the facility</li> </ul>   |

|            |   |
|------------|---|
|            | <p><b>Decommissioning</b></p> <ul style="list-style-type: none"> <li>– decommissioning of the filter gallery from Windscale Chimney Pile 1</li> <li>– continue to retrieve and treat, for long-term storage, legacy flocculent from the flocculent storage tank</li> </ul>  |
| <b>SF</b>  | <p>All of the spent fuels discharged from the operating AGR power stations and the operating or defuelling Magnox power stations reactors are sent to Sellafield for management. The management of AGR fuel under contracts with EDF Energy provides a significant income stream to the NDA. Sellafield will continue to implement the strategy to reprocess all Magnox fuel and to complete the Thermal Oxide Reprocessing Plant (THORP) reprocessing contracts for both EDF Energy's AGR fuel and overseas customers' fuels.</p> <p><b>The following activities highlight the key steps:</b></p> <ul style="list-style-type: none"> <li>• Continue to reprocess Magnox Fuel in line with MOP9 (<i>ref 2</i>)</li> <li>• Continue to receive AGR fuel from EDF Energy</li> <li>• Continue to reprocess oxide fuel through THORP from EDF Energy and overseas customers</li> <li>• Continue the removal of Multi-Element Bottles (MEBs) from THORP</li> <li>• Continue to receive Dounreay Fast Reactor (DFR) breeder fuel from Dounreay</li> </ul> |
| <b>NM</b>  | <p>Sellafield is the custodian of the majority of the UK's stockpile of plutonium which is held in safe and secure storage. Consolidation of materials is an ongoing activity and will continue to be part of the sites mission.</p> <p><b>The following activities highlight the key steps:</b></p> <ul style="list-style-type: none"> <li>• Continue the safe and secure storage of plutonium in line with UK policy</li> <li>• Develop the programme for the transfer of nuclear materials from Harwell to Sellafield</li> </ul>   |
| <b>IWM</b> | <p>The various activities of the site produce wastes in many forms. This requires varying degrees of treatment and onward processing. The site will continue to focus on safe, efficient management of these wastes from reducing the stocks of Highly Active Liquor (HAL) which are produced as part of the reprocessing operations, to returning vitrified material overseas and management of on-site intermediate and low level wastes.</p> <p><b>The following activities highlight the key steps:</b></p> <ul style="list-style-type: none"> <li>• Continue to process HAL through the Waste Vitrification Plant</li> <li>• Continue to repatriate overseas owned vitrified HAL to its country of origin</li> <li>• Continue to retrieve legacy Plutonium Contaminated Material (PCM)</li> <li>• Continue to receive further module deliveries for the construction of Evaporator D</li> <li>• Diversion of materials from LLWR in line with the LLW Strategy implementation and optimisation plan</li> </ul>                                 |
| <b>CE</b>  | <p>A number of key enabling activities require specific focus which range from infrastructure refurbishment or replacement projects, in support of the above activities, through to key change programmes which aim to improve operational delivery and efficiency on the site.</p> <p><b>The following activities highlight the key steps:</b></p> <ul style="list-style-type: none"> <li>• Continue the Sellafield infrastructure enhancement programme</li> <li>• Continue the implementation and realisation of the benefits from the Integrated Change Programme (ICP)</li> <li>• Continue to deliver NDA's support and overhead cost savings equivalent to a 25% reduction of the original cost base whilst maintaining safety and security of the nuclear site</li> </ul>  |

**2013 – 2014 Regulatory Matters**

- Continued delivery against decommissioning milestones
- Continued delivery of HAL stock reduction
- Continue to deliver the MOP to ensure the OSPAR discharge strategy is achieved
- Continue to deliver the suite of improvements necessary to ensure that the site is resilient to severe events
- Maintain an asset management regime that takes into account the impact of asset condition on meeting regulation and delivery of milestones

**2014 – 2016 Planned Key Activities**

|            |   |
|------------|---|
| <b>SR</b>  | Completion of the removal of metal fuel from the Pile Fuel Storage Pond   |
|            | Commence sludge retrievals from the First Generation Magnox Storage Pond  |
|            | Continue to retrieve and treat legacy flocculent from the flocculent storage tanks                                    |
|            | Continue to develop the capability to retrieve waste from legacy facilities   |
| <b>SF</b>  | Continue to reprocess Magnox fuel in line with MOP9 ( <i>ref 2</i> )  |
|            | Deliver the ongoing waste treatment activities in the AGR Programme   |
|            | Completion of all oxide fuel contracts for overseas customers   |
|            | Continue the removal of MEBs from THORP   |
|            | Continue to receive and reprocess AGR fuel from EDF Energy  |
| <b>NM</b>  | Develop the approach for implementation of the safe and secure storage of plutonium                                   |
|            | Capability to receive exotic fuels from Dounreay  |
| <b>IWM</b> | Continue to process HAL through the Waste Vitrification Plant   |
|            | Continue to repatriate overseas owned vitrified HAL to country of origin  |
|            | Diversion of materials from LLWR in line with the LLW Strategy implementation and optimisation plan                   |
| <b>CE</b>  | Deliver a transition from ICP to Sustaining Excellence to embed continuous performance improvement as a core activity |

|   |   |
|---|---|
|  | <p>Magnox Limited is the SLC responsible for the operation of the Berkeley, Bradwell, Chapelcross, Dungeness A, Hinkley Point A, Hunterston A, Oldbury, Sizewell A, Trawsfynydd and Wylfa sites.</p> <p>The current PBO of the company is EnergySolutions EU Ltd.</p> |
|   | <p><b>Planned expenditure for 2013/2014 - £652 million</b></p>  |

The NDA requires Magnox Ltd SLC to manage the generation, defuelling, preparations to enter Care and Maintenance, the Care and Maintenance phase and final site clearance of the Magnox reactor fleet.

The key activities are maintaining safety and security at all sites and managing the environmental impact of activities which include:

- Electricity generation at Wylfa and Maentwrog
- Defuelling at Chapelcross\* Sizewell A and Oldbury
- Accelerated decommissioning at Bradwell and Trawsfynydd (lead sites)
- Decommissioning and demolition of facilities at Hunterston A, Berkeley, Dungeness A and Hinkley Point A

These activities are combined into the Magnox Optimised Decommissioning Programme (MODP) (*ref 1*) which uses the 'lead and learn' concept to drive value for competition. The experience of work and learning on 'lead' sites can be rolled out to the rest of the sites over time.

Magnox will defuel their remaining sites in line with MOP9 (*ref 2*). The publication of MOP9 in Summer 2012 has presented future outcomes in a manner which recognises programme variability and sensitivity to events. The use of upper and lower bound performance levels provides a realistic indication of the potential range of key dates and means MOP9 will remain valid, provided average reprocessing performance lies within the Performance Range.

\*Chapelcross will be continue to be a 'Defuelling' site until the Fuel Free Verification is received from Office for Nuclear Regulation (ONR)

| <b>2013 – 2014 Magnox Key Activities</b> |   |
|--|---|
| <b>SR</b>                                | Continue to drive the 'lead and learn' principle throughout the Magnox sites  |
| <b>SF</b>                                | Management of the MOP and co-ordination of Magnox fuel management activities with Sellafield and Dounreay   |
| <b>IWM</b>                               | Delivery of the Magnox element of the estate-wide Low Level Waste management plan   |
| <b>BO</b>                                | Continued electricity generation at Wylfa   |
|  | Support to NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal  |
| <b>CE</b>                                | Provide support to the NDA in the competition for a PBO   |
|  | Implementation of a transition and restructuring plan which delivers lead and learn principles through programmisation  |
|  | Continue to deliver the NDA's support and overhead cost savings equivalent to a 25% reduction of the original cost base whilst maintaining the safety and security of the sites |
|  | Development of Interim State approaches and revised Care & Maintenance management arrangements  |
|  | Development of a project management capability through implementation of a continuous improvement plan  |

| <b>2013 – 2014 Regulatory Matters</b> |  |
|---------------------------------------|--|
|                                       | <ul style="list-style-type: none"> <li>• NDA and regulatory permissioning in support of the Care and Maintenance entry definitions and arrangements</li> </ul> |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SF</b>                                 | Management of the MOP and co-ordination of Magnox fuel management activities with Sellafield and Dounreay                  |
| <b>IWM</b>                                | Delivery of the Magnox element of the estate-wide joint LLW management plan  |
| <b>BO</b>                                 | Support to the NDA in property activities to reduce NDA decommissioning liability and achieve best value on asset disposal |
| <b>CE</b>                                 | Complete transition to the new PBO following competition   |

**Berkeley - Location:** Gloucestershire, **Area:** 27 hectares



**Current Key Milestones -**

- 2021** - Site enters Care and Maintenance
- 2070** - Final site clearance commences
- 2079** - Final site clearance achieved

**Status of land -**

- De-licensed:** 11 hectares (27 acres) of the site (approximately 40%) has been de-licensed
- De-designation:** Modification of Designating Direction signed by the Minister in January 2012

Top left: Berkeley site, Top right: Transportation of Berkeley boilers off site to be recycled

**2013 – 2014 Key Activities**

**IWM**

Continue retrieval activities in the active waste vaults and caesium removal plant

Complete construction of Intermediate Level Waste (ILW) Interim Storage Facility (ISF)

**2013 – 2014 Regulatory Matters**

- Regulatory permissioning in support of the Berkeley ILW management programme

**2014 – 2016 Planned Key Activities**

**IWM**

Continue retrieval activities in the active waste vaults

Continue other ILW plant retrievals and packaging

**2014 – 2016 Regulatory Matters**

- NDA and regulatory permissioning in support of entry to Care and Maintenance

| <b>Bradwell - Location: Essex, Area: 20 hectares</b>                              |   |  |
|---|---|--|
|  |  | <p><b>Current Key Milestones -</b><br/> <b>2015</b> - Site enters Care and Maintenance<br/> <b>2083</b> - Final site clearance commences<br/> <b>2092</b> - Final site clearance achieved</p> <p><b>Status of land</b><br/> All 20 hectares remain covered by the nuclear site licence</p> |

Top left: Bradwell site, Top right: Demolition activities on the site

| <b>2013 – 2014 Key Activities</b> |  |
|-----------------------------------|--|
| <b>SR</b>                         | Continuation of ILW retrieval and storage activities   |
|                                   | Continuation of the retrieval of Fuel Element Debris (FED)                                   |
|                                   | Decommissioning and demolition activities in preparation for entry into Care and Maintenance |

| <b>2013 – 2014 Regulatory Matters</b>   |
|---|
| <ul style="list-style-type: none"> <li>Regulatory concurrence to Care and Maintenance arrangements</li> </ul> |

| <b>2014 – 2016 Planned Key Activities</b> |   |
|---|---|
| <b>SR</b>                                 | Completion of FED retrievals and dissolution  |
|   | Ponds building/complex modifications completed for entry into Care and Maintenance    |
|   | Completion of Reactor building deplant and demolition activities                      |
|   | Completion of Reactor building cladding and Safestore entry into Care and Maintenance |
|   | Site completes activities to enable entry into Care and Maintenance                   |
| <b>CE</b>                                 | Transitional management arrangements for Care and Maintenance state                   |

| <b>2014 – 2016 Regulatory Matters</b>   |
|---|
| <ul style="list-style-type: none"> <li>NDA and regulatory permissioning in support of the Care and Maintenance entry definitions and transitional arrangements</li> </ul> |

**Chapelcross - Location: Dumfries and Galloway, Area: 96 hectares**



**Current Key Milestones -**

- 2017-23** - Interim Care and Maintenance
- 2028** - Site enters Care and Maintenance
- 2085** - Final site clearance commences
- 2095** - Final site clearance achieved

**Status of land**

All 96 hectares remain covered by the nuclear site licence.

*Top left: Chapelcross site, Top right: Working on the asbestos project at Chapelcross*

**2013 – 2014 Key Activities**

- |           |  |
|-----------|--|
| <b>SR</b> | Removal of bulk asbestos from the first and second reactor buildings |
|-----------|--|

**2013 – 2014 Regulatory Matters**

- Site fuel free verification agreed with the ONR

**2014 – 2016 Planned Key Activities**

- |           |  |
|-----------|--|
| <b>SR</b> | Continued hazard reduction activities towards Interim Care and Maintenance |
|           | Removal of bulk asbestos from the third and fourth reactor building        |
|           | Completion of construction of the ISF                                      |
|           | Ponds & MAC Retrievals and Packaging                                       |
|           | All pond equipment and water treatment resin retrieved and packaged        |
|           | Removal of redundant fuel skips from pond 2                                |

**2014 – 2016 Regulatory Matters**

- NDA and regulatory permissioning in support of the Care and Maintenance entry definitions and arrangements

| <b>Dungeness A - Location: Kent, Area: 20 hectares</b>                            |   |   |
|---|---|---|
|  |  | <p><b>Current Key Milestones -</b><br/>                 2019-23 - Interim Care and Maintenance<br/>                 2027 - Site enters Care and Maintenance<br/>                 2087 - Final site clearance commences<br/>                 2097 - Final site clearance achieved</p> <p><b>Status of land</b><br/>                 All 20 hectares remain covered by the nuclear site licence</p> |

*Top left: Dungeness A site, Top right: South Site Clearance at Dungeness A*

| <b>2013 – 2014 Key Activities</b> |  |
|-----------------------------------|--|
| <b>SR</b>                         | Continue the enabling works for south area of the site clearance |

| <b>2013 – 2014 Regulatory Matters</b> |   |
|---------------------------------------|---|
|                                       | <ul style="list-style-type: none"> <li>• Regulatory concurrence to Care and Maintenance arrangements</li> </ul> |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SR</b>                                 | Completion of the clearance of the south area of the site                  |
|   | Continued hazard reduction activities towards interim Care and Maintenance |

| <b>2014 – 2016 Regulatory Matters</b> |   |
|---------------------------------------|---|
|                                       | <ul style="list-style-type: none"> <li>• Regulatory concurrence to Care and Maintenance arrangements</li> </ul> |

| <b>Hinkley Point A - Location: Somerset, Area: 19 hectares</b>                    |   |   |
|---|---|---|
|  |  | <p><b>Current Key Milestones -</b><br/>                 2025 – Site enters Care and Maintenance<br/>                 2081 – Final site clearance commences<br/>                 2090 – Final site clearance achieved</p> <p><b>Status of land</b><br/>                 19 hectares remain covered by the nuclear site licence</p> |

*Top left:* Hinkley Point A site, *Top right:* Hinkley Point A turbine hall deplanted

| <b>2013 – 2014 Key Activities</b> |  |
|-----------------------------------|--|
| <b>IWM</b>                        | Completion of ILW programme settling tanks 1, 2 and 3 activities |

| <b>2013 – 2014 Regulatory Matters</b>  |
|--|
| <ul style="list-style-type: none"> <li>• Conduct the 10 yearly Periodic Safety Review</li> </ul> |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SR</b>                                 | Reactor 1 and 2 ponds drained and stabilised |
|   | Completion of construction of the ISF        |

| <b>2014 – 2016 Regulatory Matters</b>   |
|---|
| <ul style="list-style-type: none"> <li>• Regulatory concurrence to Care and Maintenance arrangements</li> </ul> |

| <b>Hunterston A - Location: Ayrshire, Area: 15 hectares</b>                       |   |   |
|---|---|---|
|  |  | <p><b>Current Key Milestones -</b><br/>                 2022 - Site enters Care and Maintenance<br/>                 2071 - Final site clearance commences<br/>                 2080 - Final site clearance achieved</p> <p><b>Status of land</b><br/>                 All 15 hectares remain covered by the nuclear site licence</p> |

*Top left: Hunterston A site, Top right: ILW Store Vault*

| <b>2013 – 2014 Key Activities</b>         |   |
|---|---|
| <b>SR</b>                                 | Continuation of wet ILW retrievals, processing and storage activities   |
|   | Civil construction of solid ILW encapsulation facility  |
| <b>2014 – 2016 Planned Key Activities</b> |   |
| <b>SR</b>                                 | Completion of the pond wall surfaces sealing and stabilisation  |
|   | Continue wet ILW retrieval and processing   |
| <b>2014 – 2016 Regulatory Matters</b>     |   |
|   | <ul style="list-style-type: none"> <li>Regulatory concurrence to Care and Maintenance arrangements</li> </ul> |

**Oldbury - Location:** South Gloucestershire, **Area:** 51 hectares

|   |   |   |
|---|---|---|
|  |  | <p><b>Current Key Milestones -</b><br/> <b>2027</b> - Site enters Care and Maintenance<br/> <b>2092</b> - Final site clearance commences<br/> <b>2101</b> - Final site clearance achieved</p> <p><b>Status of land</b><br/> <b>De-licensed:</b> 35 hectares (86 acres) of the site (approximately 69%) has been de-licensed.<br/> <b>De-designation:</b> Modification of Designating Direction signed by the Minister in January 2012</p> |
|---|---|---|

Top left: Oldbury site, Top right: Inside a reactor at Oldbury

**2013 – 2014 Key Activities**

|           |   |
|-----------|---|
| <b>SR</b> | Preparations for decommissioning and hazard reduction |
| <b>SF</b> | Continue reactor defuelling in line with MOP9 (ref 2) |

**2013 – 2014 Regulatory Matters**

- Defuelling in line with ONR requirements

**2014 – 2016 Planned Key Activities**

|           |  |
|-----------|--|
| <b>SR</b> | Continued hazard reduction activities towards Care and Maintenance |
| <b>SF</b> | Continue reactor defuelling in line with MOP9 (ref 2)              |

**2014 – 2016 Regulatory Matters**

- Regulatory concurrence to Care and Maintenance arrangements

| <b>Sizewell A - Location: Suffolk, Area: 14 hectares</b>                          |   |   |
|---|---|---|
|  |  | <p><b>Current Key Milestones -</b><br/>                 2027 - Site enters Care and Maintenance<br/>                 2088 - Final site clearance commences<br/>                 2097 - Final site clearance achieved</p> <p><b>Status of land</b><br/>                 All 14 hectares remain covered by the nuclear site licence</p> |

*Top left: Sizewell site, Top right: Spent fuel being loaded for transport to Sellafield*

| <b>2013 – 2014 Key Activities</b> |  |
|-----------------------------------|--|
| <b>SR</b>                         | Preparations for decommissioning and hazard reduction  |
| <b>SF</b>                         | Continue defuelling in line with MOP9 ( <i>ref 2</i> ) |

| <b>2013 – 2014 Regulatory Matters</b>  |
|--|
| <ul style="list-style-type: none"> <li>Defuelling in line with ONR requirements</li> </ul> |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SF</b>                                 | Complete defuelling in line with MOP9 ( <i>ref 2</i> ) |

| <b>2014 – 2016 Regulatory Matters</b>  |
|--|
| <ul style="list-style-type: none"> <li>Fuel free verification agreed with ONR</li> </ul> |

**Trawsfynydd - Location: Gwynedd, North Wales, Area: 15 hectares**



**Current Key Milestones -**

- 2016** - Site enters Care and Maintenance
- 2027** - Safestore completed
- 2074** - Final site clearance commences
- 2083** - Final site clearance achieved

**Status of land**

All 15 hectares remain covered by the nuclear site licence

*Top left: Trawsfynydd site, Top right: Deplanting and demolition work at Trawsfynydd*

**2013 – 2014 Key Activities**

|           |  |
|-----------|--|
| <b>SR</b> | Active waste vaults – continuation of the ILW solid retrievals and processing                |
|           | Complete bulk retrievals for the Main Sludge Vault (MSV) and Resin Vault 3 (RV3)             |
|           | Commence retrievals and encapsulation of FED   |
|           | Decommissioning and demolition activities in preparation for entry into Care and Maintenance |

**2013 – 2014 Regulatory Matters**

- Regulatory concurrence to Care and Maintenance arrangements

**2014 – 2016 Planned Key Activities**

|           |  |
|-----------|--|
| <b>SR</b> | Active waste vaults – complete the ILW solid retrievals and processing                       |
|           | Agreement of ponds for entry into Care and Maintenance                                       |
|           | Completion of retrievals and encapsulation of FED  |
|           | Completion of ILW Retrievals and Storage Activities  |
|           | Decommissioning and demolition activities in preparation for entry into Care and Maintenance |

**2014 – 2016 Regulatory Matters**

- NDA and regulatory permissioning in support of the Care and Maintenance entry definitions and transitional arrangements

**Wylfa - Location: Anglesey, Area: 21 hectares**



**Current Key Milestones -**

- 2025** - Site enters Care and Maintenance
- 2100** - Final site clearance commences
- 2105** - Final site clearance achieved

**Status of land** – All 21 hectares remain covered by the nuclear site licence.

Top left: Wylfa site, Top right: Wylfa pile cap

**2013 – 2014 Key Activities**

|           |   |
|-----------|---|
| <b>SF</b> | Completion of secondary fuel route project for defuelling |
| <b>BO</b> | Continued electricity generation                          |

**2013 – 2014 Regulatory Matters**

- Submission to ONR of the 10 yearly Periodic Safety Review

**2014 – 2016 Planned Key Activities**

|           |   |
|-----------|---|
| <b>SR</b> | Preparations for decommissioning and hazard reduction             |
| <b>SF</b> | Commencement of reactor bulk defuelling in line with MOP9 (ref 2) |
| <b>BO</b> | Continued optimisation of electricity generation                  |

| <b>Dounreay Site Restoration Limited</b>  |  |
|---|--|
|  <p><b>Dounreay Site Restoration Ltd</b></p> | <p>Dounreay Site Restoration Limited (DSRL) is the SLC responsible for the operation of the Dounreay site.</p> <p>The current PBO is Babcock Dounreay Partnership Limited (BDP).</p> |
|   | <p><b>Planned expenditure for 2013/2014 - £175 million</b></p>   |

| <b>Dounreay - Location: Caithness, Scotland, Area: 74 hectares</b>                |   |  |
|---|---|--|
|  |  | <p><b>Current Key Milestones -</b></p> <p><b>2014</b> – LLW facilities commence operations<br/> <b>2017</b> – Dounreay Fast Reactor (DFR) All liquid metal residues destroyed<br/> <b>2018</b> – Prototype Fast Reactor (PFR) liquid metal residues destroyed<br/> <b>2020</b> – All material for disposal removed from shaft<br/> <b>2021</b> – PFR dismantled<br/> <b>2022-25</b> – Interim State achieved in this timeframe</p> <p><b>Status of land</b> - All 74 hectares covered by the nuclear licence</p> |

Top left: Dounreay site, Top right: Construction of the first two LLW vaults at Dounreay

The targets below are the current targets as specified in the contract. The bid submitted by Babcock Dounreay Partnership (BDP) for the Dounreay Competition is currently being incorporated into the DSRL Lifetime Plan. Following this process one or more targets may be subject to re-negotiation with DSRL.

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | Demolition of the Dounreay Material Test Reactor complex  |
|                                   | Strategy for particle management agreed with stakeholders   |
| <b>SF</b>                         | Progress milestones towards completion of out of reactor breeder fuel shipments to Sellafield                   |
| <b>CE</b>                         | Letter of Compliance (LoC) for Silo Intermediate Level Waste received   |
|                                   | All necessary regulator authorisation permits or licences for Low Level Waste Facility received from Regulators |

| <b>2014 – 2016 Planned Key Activities</b> |   |
|---|---|
| <b>SR</b>                                 | Characterisation and remediation of the south-west corner of the site                             |
|   | Demolition of the shaft cover building  |
|   | Characterisation and remediation of any contamination found off site which emanated from the site |
|   | Landfill 42 post closure safety case approved   |
|   | Decontamination of PFR pond suitable for final disposal   |

|            |   |
|------------|---|
| <b>SF</b>  | Completion of removal of spent fuel cans from the buffer fuel store and pond matrix                 |
|            | Complete DFR fuel removal from reactor  |
|            | Construction of new fuel characterisation facilities for the characterisation of materials complete |
|            | Completion of delivery of all out of reactor DFR breeder fuel to Sellafield                         |
| <b>NM</b>  | Commence exotic fuel transportation to Sellafield   |
| <b>IWM</b> | Completion of the Material Test Reactor raffinate immobilisation                                    |
|            | Completion of the DFR raffinate immobilisation  |
|            | New LLW facility including the grouting plant to be operational                                     |
|            | Completion of the construction of the encapsulation facility  |
|            | Completion of the PFR raffinate immobilisation  |

| <b>Research Sites Restoration Limited</b>   |   |
|---|---|
|  <p style="margin: 0;"><b>Research Sites Restoration Ltd</b></p> | <p>Research Sites Restoration Ltd (RSRL) are the SLC responsible for the operation of the Harwell and Winfrith sites. The current PBO of the company is UKAEA Ltd, which is owned by Babcock International Group (BIG) Plc.</p> |
| <b>Planned expenditure for 2013/2014 - £65 million</b>  |   |

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>IWM</b>                        | Delivery of the RSRL element of the estate-wide LLW Management Plan   |
| <b>CE</b>                         | Provide support to the NDA in the competition for a new PBO   |
|                                   | Continue to deliver NDA's support and overhead cost savings equivalent to a 25% reduction of the original cost base whilst maintaining the safety and security of the sites |

| <b>Harwell - Location: Oxfordshire, Area: 110 hectares</b>  |  |
|---|--|
|   |  |
| <p><b>Current Key Milestones -</b></p> <ul style="list-style-type: none"> <li><b>2023</b> - Primary facilities decommissioning complete</li> <li><b>2027</b> - Reactor decommissioning complete</li> <li><b>2027</b> - Interim State achieved</li> <li><b>2064</b> - Final site clearance achieved</li> </ul> |  |
| <p><b>Status of land</b></p> <p><b>De-licensed:</b> 18 hectares (44 acres) of the site (approximately 16%) has been de-licensed.</p> <p><b>De-designation:</b> Modification to Designating Direction signed by Minister in December 2012.</p>   |  |

Top left: Harwell site, Top right: Decommissioning work underway at Harwell

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | Care and Maintenance of redundant reactors and other facilities                   |
|                                   | Decommissioning of redundant facilities   |
| <b>NM</b>                         | Implementation of a programme for the transfer of nuclear materials to Sellafield |
| <b>IWM</b>                        | Recovery, processing and packaging of solid ILW                                   |

| <b>2014 – 2016 Planned Key Activities</b> |   |
|---|---|
| <b>SR</b>                                 | Care and Maintenance of redundant reactors and other facilities   |
| <b>NM</b>                                 | Continue with the programme for the transfer of nuclear materials |

| <b>Winfrith - Location: Dorset, Area: 88 hectares</b>                             |   |  |
|---|---|--|
|  |  | <p><b>Current Key Milestones -</b><br/>                 2021 - DRAGON reactor complex decommissioning complete<br/>                 2021 - Steam Generating Heavy Water Reactor (SGHWR) complex decommissioning complete<br/>                 2022 – Interim State achieved</p> <p><b>Status of land</b><br/> <i>De-licensed:</i> 10 hectares (24 acres) of the site (approximately 12%) has been de-licensed.</p> |

Top left: Winfrith site, Top right: Decommissioning work underway at the DRAGON reactor at Winfrith

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | DRAGON Reactor – Commence the 2 <sup>nd</sup> Stage of decommissioning      |
|                                   | Continue preparations for an optimised approach to Winfrith Decommissioning |
|                                   | SGHWR – Completion of the asbestos tie-down activities                      |
|                                   | SGHWR – Complete the decommissioning of the old effluent pipeline           |

| <b>2014 – 2016 Planned Key Activities</b> |   |
|---|---|
| <b>SR</b>                                 | Continued progress towards Winfrith Interim State               |
|   | SGHWR – commence the detailed design to remove the reactor core |

| <b>Low Level Waste Repository Limited</b>  |   |
|--|---|
|  <span style="font-size: 2em; font-weight: bold; color: #808080; vertical-align: middle;">LLWR Ltd</span> | <p>Low Level Waste Repository (LLWR) Limited is the SLC responsible for both the operation of the LLW site near the village of Drigg in Cumbria and the delivery of the National Programme for lower activity radioactive waste on behalf of the NDA. The PBO of the company is UK Nuclear Waste Management Limited. The Parent Body Agreement (PBA) for operating the site will continue from 1 April 2013 for a further five years.</p> |
| <b>Planned expenditure for 2013/2014 - £33 million</b>   |   |

| <b>LLWR - Location: Cumbria, Area: 110 hectares</b>                               |   |  |
|---|---|--|
|  |  | <p><b>Current Key Milestones -</b><br/> <b>2014</b> – Environmental Safety Case (ESC) approval<br/> <b>2018</b> – Plutonium Contaminated Material (PCM) facilities removal complete<br/> <b>2007-55</b> – Engineered vaults construction<br/> <b>2080</b> – Final site closure achieved</p> <p><b>Status of land</b><br/>                     All 110 hectares remain covered by the nuclear site licence.</p> |

Top left: LLWR site, Top right: Drums going through the Studsvik Metal Recycling Facility at Lillyhall, Cumbria

| <b>2013 – 2014 Key Activities</b> |  |
|-----------------------------------|--|
| <b>SR</b>                         | Ongoing site preparation for phased construction of final cap for trenches 1 to 7 and for Vault 8  |
|                                   | Ongoing decommissioning of PCM facilities  |
|                                   | Ongoing development of the ESC to support the Lifetime Plan  |
| <b>IWM</b>                        | Continue segregated waste, treatment and disposal services in line with UK LLW Strategy  |
|                                   | Work with consigning SLCs to improve waste forecasts and the waste inventory   |
|                                   | Maintain the momentum of the Supply Chain investment in waste treatment arrangements   |
|                                   | Delivery of the National LLW Programme to optimise LLW Strategy Implementation   |
| <b>CE</b>                         | Continue to deliver NDA's support and overhead cost savings equivalent to a 25% reduction of the original cost base whilst maintaining safety and security of the site |

| <b>2013 – 2014 Regulatory Matters</b> |   |
|---------------------------------------|---|
|                                       | • Demonstrate conduct of operations and maintenance improvements to ONR         |
|                                       | • Support Environment Agency in the assessment of an ESC                        |
|                                       | • Determination of the site optimisation and closure works planning application |

| <b>2014 – 2016 Planned Key Activities</b> |   |
|---|---|
| <b>SR</b>                                 | Ongoing site preparation for phased construction of the final cap for trenches 1 to 7 and Vault 8 |
|   | Ongoing decommissioning of PCM facilities   |
|   | Ongoing implementation of the ESC to support the Lifetime Plan                                    |
| <b>IWM</b>                                | Continue segregated waste, treatment and disposal services in line with UK LLW Strategy           |
|   | Work with consigning SLCs to improve waste forecasts and inventory                                |
|   | Maintain the momentum of the Supply Chain investment in waste treatment arrangements              |
|   | Delivery of the National Waste Programme to optimise LLW Strategy Implementation                  |

| <b>Springfields Fuels Limited</b>   |  |
|---|--|
|  | <p>Springfields is a nuclear fuel manufacturing site and is located near Preston in Lancashire. The site is operated by Springfields Fuels Limited (SFL) and used to manufacture a range of fuel products for both UK and international customers. The site is currently decommissioning historic uranic residues and redundant facilities.</p> <p>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 prior to the sale.</p> |
|   | <p><b>Planned expenditure for 2013/2014 - £53 million</b></p>  |

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | Continue the Post Operational Clean Out (POCO) and decommissioning of redundant areas   |
| <b>NM</b>                         | Processing of historic residues to recover uranium for return to the nuclear fuel cycle |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SR</b>                                 | Continue the POCO and decommissioning of redundant areas         |
| <b>NM</b>                                 | Continue to clear uranic residues in the uranium recovery plants |

| <b>Capenhurst Nuclear Services</b>  |  |
|---|--|
|  | <p>The Capenhurst site is located near Ellesmere Port in Cheshire, and was formerly home to a uranium enrichment plant and associated facilities that ceased operation in 1982.</p> <p>In November 2012 the site was transferred to URENCO, owners of the adjacent licensed site, and will be amalgamated into a single nuclear licence. Existing activities undertaken by Sellafield Ltd will transfer to URENCO.</p> <p>Agreement has been signed for processing of NDA owned legacy materials.</p> <p>NDA and URENCO have also signed an agreement for the processing of Government-owned by-product/legacy material from uranium enrichment (known as 'Tails') through URENCO's Tails Management Facility.</p> <p>It is anticipated that this agreement will reduce NDA's net liabilities for managing and clearing the site while also paving the way for URENCO to invest in new facilities as required in order to meet future customer demand.</p> |
| <b>Planned expenditure for 2013/2014 - £21 million</b>                            |  |

| <b>2013 – 2014 Key Activities</b> |   |
|-----------------------------------|---|
| <b>SR</b>                         | Residue processing and HEX bottle washing will recommence as well as a small number of other decommissioning and remediation projects   |
|                                   | The site will start the year in limited operations post re-licensing with the aim of being fully operational by May 2013  |
|                                   | The main focus for the site will be to progress the Legacy Cylinder Facility (LCF) through the design stages. This facility is a necessary pre-requisite in the preparation of 'tails' for processing in the URENCO de-conversion facility. In addition, implementation of the Low Voltage Rationalisation project will be progressed |

| <b>2014 – 2016 Planned Key Activities</b> |  |
|---|--|
| <b>SR</b>                                 | The LCF project will continue through the design stages                  |
|   | Residue processing and HEX bottle washing will continue                  |
|   | Magnox Depleted Uranium drum over pack project is planned to re-commence |

## NDA and RWMD

### Nuclear Decommissioning Authority

The Energy Act 2004 (ref 3) transferred the assets and liabilities of all the sites included in this Business Plan to the NDA. The NDA has five offices located across the UK with its headquarters in Cumbria. The NDA acts as a strategic authority.

Delivery of the NDA's mission is primarily through the SLC's. The NDA's role is:

- **Strategy** – development, long-term scenario planning and options development
- **Planning** – securing and allocation of funding, development of plans and options
- **Incentivisation** – designing and implementing the right contract models, incentivisation principles and processes to achieve the required outcomes
- **Sanctioning** – sanctioning of major programmes and projects and post investment appraisals
- **Performance Management** – deep dive assurance reviews, performance monitoring, performance and financial reporting

| 2013 – 2014 Key Activities   |   |
|--|---|
| SR   | Prioritisation of funding for high risk and hazard legacy wastes  |
|  | Programme optimisation including accelerated scenarios/options  |
| NM   | Continue to support the development of Government policy for the management of nuclear materials  |
|  | Progress the capability to transfer materials between sites   |
| IWM  | Establish the ILW programme with the SLCs including co-location potential   |
| BO   | To raise capital receipts from the sale of surplus property assets of at least £3 million over the next two years   |
| CE   | Continue to deliver the Magnox and RSRL competition to plan   |
|  | Further develop procurement strategies and policies which aim to deliver at least 20% of the external supply chain spend with Small and Medium Enterprises in line with Government support for the sector |
|  | Progress plans for delivering estate-wide records management including a Nuclear Archive facility   |
|  | Begin preparations for the next Spending Review   |
|  | Organise and run an annual forum to support cross-estate risk management sharing of best practice, promote effective sharing and learning from common issues and mitigations                              |
|  | Continued development of contract options for Sellafield  |
|  | Ensure effectiveness of the new LLWR contract arrangements by carrying out Internal Audit reviews   |
|  | Review and measure the capabilities of resources within SLCs to identify areas for improvement e.g. Project / Programme Management  |
|  | Maximise the use of resources and protect the skills base by continuing to build the Transition Framework and implement improvements  |
|  | Implementation of the Direct Research Portfolio Framework Contracts to support the development of strategy and estate wide needs and opportunities  |
|  | Improving awareness, oversight and response to potential areas of fraud, bribery and corruption across the estate   |
|  | Single Estate-Wide Record Retention Schedule agreed and published   |
|  | Pre-recess filing of unqualified NDA 2012/2013 accounts and provision of support to allow DECC to file consolidated accounts for 2012/2013  |
| Produce Learning from Experience guidance on Priority Programme Reports to share best practice and drive continuous improvement across NDA's portfolio |   |

### 2014 – 2016 Planned Key Activities

|           |  |
|-----------|--|
| <b>CE</b> | Implementation of the selected outcome from the Sellafield Contract Options Review |
|           | Construction of Albion Square in West Cumbria complete                             |
|           | Begin preparations for the next Strategy for publication in 2015/2016              |
|           | Contract award for the Magnox & RSRL Competition                                   |

### Radioactive Waste Management Directorate (RWMD)

Government has made the NDA the implementing organisation for geological disposal of Higher Activity Waste (HAW), this includes both planning and delivery. RWMD is currently running this programme and is being developed into a competent delivery organisation which is capable of applying for and holding regulatory permissions. We will continue to work with Government to implement the Managing Radioactive Waste Safely process, working with interested communities and other stakeholders.

This approach does not apply in Scotland. The Scottish Government has published “Scotland’s Higher Activity Radioactive Waste Policy 2011”. Scottish Government Policy states that:

*“The long-term management of higher activity radioactive waste should be near-surface facilities. Facilities should be located as near to the site where the waste is produced as possible”.*

The programme to deliver geological disposal and provide radioactive waste management solutions covers the following objectives:

- Engage with national and local governments and communities to identify a geological disposal facility site.
- Develop the specification, design, safety case and environmental and sustainability assessments for the disposal system and obtain regulatory support.
- In conjunction with waste producers, identify and deliver solutions to optimise the management of Higher Activity Waste.
- Develop and maintain an effective organisation and secure resources to deliver the Geological Disposal Facility programme.
- Obtain and maintain stakeholder support for our activities.
- Deliver a focused R&D programme to support geological disposal and optimised packaging solutions.
- Deliver sustainable, innovative and cost effective solutions that have public support and are in the best interest of the UK.

### 2013 – 2014 Key Activities

|            |  |
|------------|--|
| <b>IWM</b> | Continue to support the Government led MRWS process  |
|            | Deliver a robust technical programme to address knowledge gaps arising from our design and safety assessment work        |
|            | Develop and implement a stakeholder engagement plan to ensure the issues management process meets stakeholders' needs    |
|            | Continue work on GDF programme optimisation and review the baseline programme  |
|            | Produce a three year organisational development action plan to be agreed with regulators                                 |
|            | Continue to work pro-actively with waste producers in developing disposability assessments for their range of wastes     |
|            | In conjunction with the waste producers, continue to lead a programme of prioritised upstream optioneering opportunities |

**2013 – 2014 Regulatory Matters**

- As a 'Prospective SLC', will continue to be subject to voluntary scrutiny by regulators
- Work with the regulators to agree plans for transition to a regulated body
- Implement and operate improvements to the Letter of Compliance (LoC) process to support regulators' guidance on radioactive waste management

**2014 – 2016 Planned Key Activities**

|            |   |
|------------|---|
| <b>IWM</b> | Subject to a community or communities' Decision to Participate in the site identification process, identify potential candidate sites                                 |
|            | Develop environmental assessment reports following identification of potential candidate sites  |
|            | Support and lead, where appropriate, European and International projects to expand RWMD's knowledge base in needs driven areas of technology, science and engineering |
|            | Continue to work pro-actively with waste producers in developing disposability assessments for their range of wastes  |
|            | In conjunction with the waste producers, continue to lead a programme of prioritised upstream optioneering opportunities and deliver the RWMD commitments             |
|            | Identify and secure resources needed for MRWS Stage 5.  |

## NDA Subsidiary Companies

The NDA has a number of subsidiary companies to manage a range of business interests. The following section describes the planned activities for our key operating subsidiaries for the next three years.

### Direct Rail Services Limited

Direct Rail Services (DRS) Limited was established in 1995 to provide a rail service for the transportation of Nuclear Material. As part of a broader portfolio including commercial freight, the key focus for DRS over the next three years is to grow profitably in all strategically identified markets with particular focus on supplying safe, secure and reliable services to the nuclear transport market.

#### 2013 – 2016 Planned Key Activities

- Continue to support all NDA facing activities in order to remain the supplier of choice in the nuclear industry and secure DRS' position as leader in the nuclear rail transport market
- Focus on developing business opportunities in the following sectors in accordance with the agreed strategy:
  - NDA Estate Support
  - Domestic and Port Intermodal
  - Specialist passenger and passenger train operating company support
  - Major construction projects including Network Rail infrastructure haulage
- Delivery of Replacement Flask Carrying Vehicles for NDA
- Renewal of the transport contract for EDF Energy Spent Fuel with NDA

### NDA Properties Limited

NDA Properties Limited primarily acts as a property management company for non-operational properties outside the nuclear licensed site boundaries, in accordance with the NDA's Land and Property Management Strategy. Over the next three years, NDA Properties will continue to optimise use of, or dispose of these assets, for the benefit of the NDA.

#### 2013 – 2016 Planned Key Activities

- Development of Albion Square in West Cumbria, for occupation by Sellafield Limited
- Continue the refurbishment of Hinton House in Warrington and increase occupancy by Sellafield Limited
- Manage non-nuclear site properties under NDA control in a cost-effective manner
- Actively market and either lease or sell surplus assets to generate income

## **International Nuclear Services Limited**

International Nuclear Services (INS) Limited manages a large portfolio of UK and international contracts for nuclear fuel recycling and transport services on behalf of the NDA. INS operates its own subsidiary company, Pacific Nuclear Transport Limited (PNTL), the world's leading marine transporter of specialist nuclear materials.

Over the next three years INS will increase its focus on the return of vitrified wastes to their country of origin. In addition INS will continue to provide a service to existing international companies whilst also developing opportunities for new commercial business both internationally and in support of the UK decommissioning programme.

### **2013 – 2016 Planned Key Activities**

- Continue management of contracts with UK and International customers for spent fuel business
- Manage uranium and plutonium services for international spent fuel business
- Transport nuclear materials, including spent fuel, Mixed Oxide (MOX) fuel, and vitrified High Level Waste (HLW) internationally
- Support the NDA in the development and implementation of transport solutions to enable the UK decommissioning programme

## **Rutherford Indemnity Limited**

Rutherford Indemnity Limited is registered in Guernsey and is regulated by the Guernsey Financial Services Commission. The Company provides insurance cover for the NDA and its estate. Over the next three years, Rutherford will continue to focus on the provision of insurance cover, at competitive rates, to support the NDA programme, with particular focus on nuclear liability cover and provision of support for changes arising from expected revisions to the Nuclear Installations Act 1965.

### **2013 – 2016 Planned Key Activities**

- Provide insurance to the NDA to support its estate-wide insurance programme
- Support the NDA in relation to the new insurance requirements which will result from implementation of changes to the Paris and Brussels Conventions on nuclear third party liability
- Manage the Company's investment portfolio consistent with the target return of Consumer Price Index + 2%

## Response to Consultation

The NDA's consultation on the 'Business Plan 2013-2016' completed on 1 February 2013, receiving 10 formal responses. Where applicable, comments have been used to amend the document to provide clarity on key activities, however there have been minimal changes.

The plan was well received with positive feedback on the layout and content. We strive to continue to keep the plan concise with clear alignment between Strategic Themes and Programmes, therefore providing the reader with an understanding of our mission.

We were once again asked to disaggregate the socio-economic, skills, R&D and knowledge management funding, however due to the nature and calibre of the business cases we receive it is hard to judge the level of funding required, which would inevitably lead us to constrain tasks within the estate. By amalgamating these budgets it allows the NDA to optimise investment decisions across these important activities.

As explained on page 5 the Business Plan is an annual plan set against the Strategy published in 2011. This plan is laid out to show the targets set against each Strategic Theme with progress reported on annually in our Annual Report and Accounts. Our Strategy is updated and published every five years, or sooner. The update due before 2016 will include an assessment of the progress that has been made in implementing our strategies.

We received some comments regarding our Stakeholder and Socio-Economic activities and we would like to re-iterate that we are committed to these areas, seeing them as a critical enabler in support of our primary functions. We publish an annual Stakeholder Engagement Plan to inform stakeholders of engagement opportunities throughout the year, and this can be found on our internet page <https://www.nda.gov.uk/stakeholders/engagement-plan.cfm>. We aim to host at least one National Stakeholder Event and one meeting for SSG Chairs per year ensuring that dates are publicised as far in advance as possible. We do, however, appreciate that in 2012 this may not have been the case and plan to rectify this for 2013.

We agree that there is a need to consider how we, the PBOs and SLCs can best engage with the wider local stakeholder community, particularly during major transition phases, and will give this further consideration.

## Glossary

|      |  |       |  |
|------|--|-------|--|
| AGR  | Advanced Gas-Cooled Reactor                | SEPA  | Scottish Environment Protection Agency |
| ARAC | Annual Report and Accounts                 | SGHWR | Steam Generating Heavy Water Reactor   |
| BIG  | Babcock International Group                | ShEx  | Shareholder Executive                  |
| BDP  | Babcock Dounreay Partnership               | SLC   | Site Licence Company                   |
| DECC | Department of Energy and Climate Change    | SSG   | Site Stakeholder Groups                |
| DCIC | Ductile Cast Iron Containers               | THORP | Thermal Oxide Reprocessing Plant       |
| DFR  | Dounreay Fast Reactor                      | UKAEA | United Kingdom Atomic Energy Authority |
| DRS  | Direct Rail Services                       | UUK   | URENCO UK Ltd                          |
| DSRL | Dounreay Site Restoration Limited          | UKNWM | UK Nuclear Waste Management            |
| EA   | Environmental Agency                       | WAGR  | Windscale Advanced Gas Cooled Reactor  |
| ESC  | Environmental Safety Case                  |       |  |
| FED  | Fuel Element Debris                        |       |  |
| FY   | Financial Year                             |       |  |
| GDF  | Geological Disposal Facility               |       |  |
| HAL  | Highly Active Liquor                       |       |  |
| HAW  | Higher Activity Waste                      |       |  |
| HLW  | High Level Waste                           |       |  |
| ICP  | Integrated Change Programme                |       |  |
| ILW  | Intermediate Level Waste                   |       |  |
| INS  | International Nuclear Services             |       |  |
| IS   | Interim State                              |       |  |
| ISF  | Interim Storage Facility                   |       |  |
| LCF  | Legacy Cylinder Facility                   |       |  |
| LETP | Liquid Effluent Treatment Plant            |       |  |
| LLW  | Low Level Waste                            |       |  |
| LLWR | Low Level Waste Repository                 |       |  |
| LoC  | Letter of Compliance                       |       |  |
| MEBs | Multi Element Bottles                      |       |  |
| MODP | Magnox Optimised Decommissioning Programme |       |  |
| MOP  | Magnox Operating Programme                 |       |  |
| MOX  | Mixed Oxide                                |       |  |
| MRWS | Managing Radioactive Waste Safely          |       |  |
| NDPB | Non-Departmental Public Body               |       |  |
| NGO  | Non-Governmental Organisations             |       |  |
| NMPL | Nuclear Management Partners Limited        |       |  |
| ONR  | Office for Nuclear Regulation              |       |  |
| PBA  | Parent Body Agreement                      |       |  |
| PBO  | Parent Body Organisation                   |       |  |
| PCM  | Plutonium Contaminated Material            |       |  |
| PFR  | Prototype Fast Reactor                     |       |  |
| PNTL | Pacific Nuclear Transport Limited          |       |  |
| POCO | Post Operational Clean Out                 |       |  |
| R&D  | Research and Development                   |       |  |
| RSRL | Research Sites Restoration Limited         |       |  |
| RWMD | Radioactive Waste Management Directorate   |       |  |

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