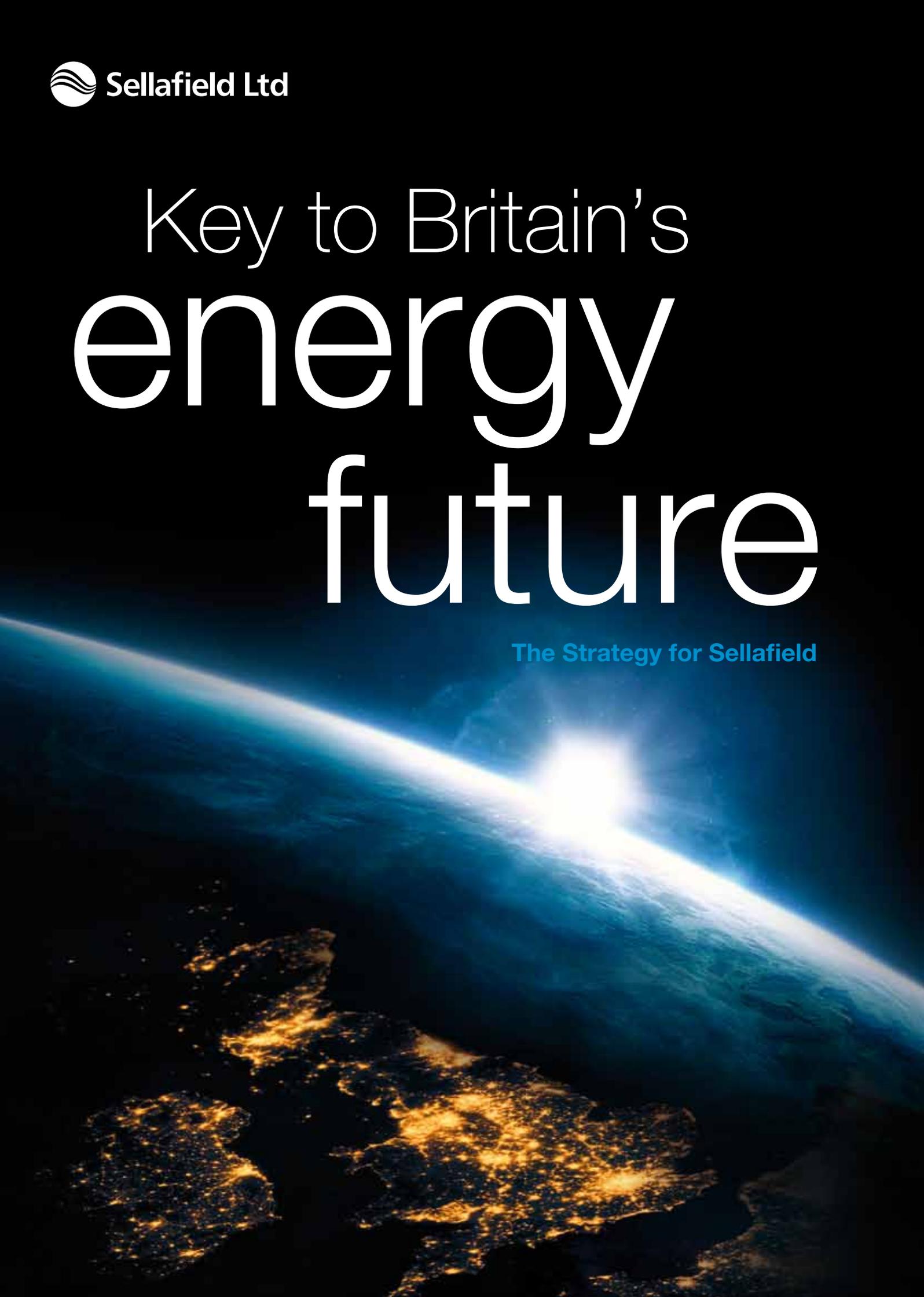


Key to Britain's  
**energy**  
**future**

The Strategy for Sellafield



# Introduction

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The safe, accelerated clean-up of the Sellafield site is not only my priority as Chief Executive of the Nuclear Decommissioning Authority (NDA), but also the focus area for the NDA as a whole.

The challenges at Sellafield are unprecedented and the need to deliver progress consistently across risk and hazard reduction, waste management and reprocessing has never been greater.

I am pleased that Tony and his executive team have dedicated the time to develop a strategy for Sellafield that is consistent with our mission for the site and that will put the site and its workforce in the best possible position for the future.

**John Clarke** Chief Executive, NDA

“There is no guarantee of new work and new facilities in West Cumbria. Failure to deliver the existing mission of safe accelerated progress at Sellafield will guarantee that there are no future missions.”

The following document sets out the vision, mission and strategic objectives that make up the strategy for Sellafield Ltd.

Although primarily focused on the Sellafield site, the strategy covers all of our activities and will be delivered by our employees who are based on the site, across West Cumbria and at Risley.

Tony Price provides the overview of the strategy, in the first section of this document, along with a summary of each of our strategic themes.

Within each theme there are a number of strategic objectives. The majority of this document is dedicated to explaining each strategic objective, how they align to our customer's objectives and how we are already making progress.

## Overview

Tony Price, Sellafield Ltd's Managing Director provides an overview of the strategy for Sellafield, including our vision and mission. This section also sets out some of the changes that will happen at Sellafield between now and 2020, such as the end of reprocessing.

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## Safe, Secure Site Stewardship

The safe and secure stewardship of the Sellafield site is our overriding priority. It covers everything from the safety of our employees and care for the environment through to the secure management of nuclear materials and it underpins every decision we make.

Strategic Objective 1	10
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## Demonstrable Progress

Sellafield is home to some of the oldest nuclear facilities in the UK and we are focusing our efforts on safely accelerating the clean-up of our legacy facilities. We will also demonstrate our progress through the timely completion of both the Magnox and the Thorp reprocessing programmes.

Strategic Objective 4	16
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## Return on Investment

The NDA presently invests more than £1.7bn of their budget to fund work at Sellafield every year. We will ensure that we demonstrate value for money through the delivery of our mission and best position the site and its people for the future.

Strategic Objective 8	24
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## Potential Rewards

We are focused on delivering the NDA's mission of safely accelerating the clean-up of the Sellafield site. Through the execution of this mission and leading the way in cost-effective nuclear waste management and decommissioning, we will demonstrate that we are the people who can deliver new missions.

Potential Rewards	30
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# 2013 to 2020

## The only constant – change

### Risk and Hazard Reduction



We face significant challenges as we start waste retrievals from high hazard facilities and bring major new waste treatment facilities into operation.

These are some of the first major nuclear new build projects in the UK for decades, so the design and construction of these new plants is a significant challenge to Sellafield Ltd and our design, construction and fabrication supply chain.

In addition, the next phase of operation, bringing these new waste treatment plants into service and recovering material from plants that have not operated for 30 years, will bring its own challenges.

### Spent Fuel Management



Both Magnox and Thorp reprocessing plants will cease operations before 2020 with a direct impact on downstream effluent and waste treatment plants.

Post reprocessing we will continue to provide spent fuel management services to the NDA and its customers.

This could include storing spent fuel and consolidating material from other NDA sites and providing inspection and storage of nuclear material.

### Waste Management



Once reprocessing plants have closed and been washed out they will cease to generate waste.

Between 2013 and 2020 the return of overseas waste will continue. New waste treatment plants and stores will be brought into operation to support retrieval and decommissioning projects.

Nuclear waste will continue to be processed, and then stored on site until a geological disposal facility becomes available.

### Project Delivery



We currently have 11 major projects either in design or construction, with more than £350 million per year invested in new nuclear projects.

The high hazard and risk reduction programmes are dependent on successful delivery of these projects.

We need world class project and design capability to successfully deliver these from both Sellafield Ltd and our partners in the supply chain. Sellafield is at the leading edge of rebuilding nuclear design and construction capability in the UK.



OVERVIEW

SAFE, SECURE SITE STEWARDSHIP

DEMONSTRABLE PROGRESS

RETURN ON INVESTMENT

POTENTIAL REWARDS

# Managing Director Overview



## **Sellafield has never backed down from a challenge.**

When the UK needed support in its war effort we created a site that could produce the nuclear material that the country needed. It is at Sellafield where we pioneered the harnessing of nuclear power to generate electricity for the country, creating a blueprint that would be used across the UK to build the Magnox fleet.

The potential to recycle spent nuclear fuel to recover useable nuclear material in the UK on an industrial scale was also realised at Sellafield.

When faced with the challenge of how to manage nuclear waste, the site delivered again. We are still the only nuclear site in the UK that can safely manage all three nuclear waste streams: low, intermediate and high. Not only can we turn this waste into solid, stable forms, we continue to look for ways to reduce the amount of waste generated.

Today we face another challenge where there is no blueprint; emptying and demolishing some of the most difficult and complex nuclear buildings in the world. The decommissioning of our Legacy Ponds and Silos.

This is no easy challenge, but we have the skills and experience needed to address it. This is our opportunity to demonstrate that Sellafield is still at the forefront of the UK's nuclear industry; designing and delivering processes and plants that will not only support our mission but also have the potential to be used to meet the national and global decommissioning challenge.

**Cleaning up Sellafield is a national mission. The challenge is an exciting one. It is our opportunity to keep Sellafield at the forefront of the UK nuclear industry.**

Our success relies on us demonstrating consistent delivery across three key areas:

- Continuing our safe, secure stewardship of the Sellafield site
- Making demonstrable progress in the completion of our commercial operations and the safe acceleration of risk and hazard reduction
- Delivering a return on the investment that our internal and external stakeholders make in the Sellafield site and demonstrating value for money

These areas of focus make up the core of our strategy for Sellafield and are underpinned by specific strategic objectives.

Many of these objectives will be familiar to you; the need to accelerate our risk and hazard reduction programme, the completion of reprocessing operations, the priority that we will continue to give to safety and the need to improve our project delivery.

We can only deliver our vision, mission and objectives for Sellafield if we all take an active role in achieving high performance every day. We must identify ways to work smarter, to improve our processes and to accelerate delivery for our customer, the NDA.

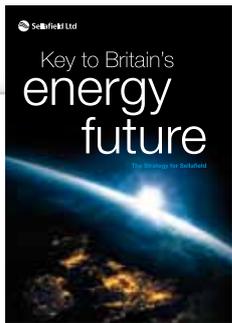
We need to demonstrate that we are an efficient, honest and hardworking organisation that can play a significant role in Britain's energy future.

In the coming years we will see the Sellafield site transformed as old buildings are emptied and demolished, as operating plants are closed and as new buildings are constructed, commissioned and operated.

**This is an exciting chapter of the Sellafield story and I am delighted to be a part of it.**

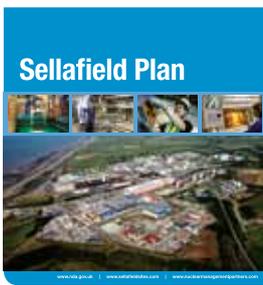
**Tony Price** Managing Director

# Plan structure



**Sellafield Ltd Strategy**

Sets out our vision and mission for Sellafield along with details of our specific strategic objectives.



**Sellafield Plan**

## Sellafield Plan

Sets out the work that we need to deliver at Sellafield and when we will do it.



**Sellafield Ltd Excellence Plan**

## Excellence Plan

Sets out the things that we need to improve to deliver our strategy.

### Enablers

- Nuclear safety and operations
- Organisation and leadership
- Resourcing and training
- Engineering
- Commercial management
- Site logistics
- Site integration
- Programme and project management

## Journey to Excellence



POTENTIAL REWARDS



# Sellafield Ltd Strategy

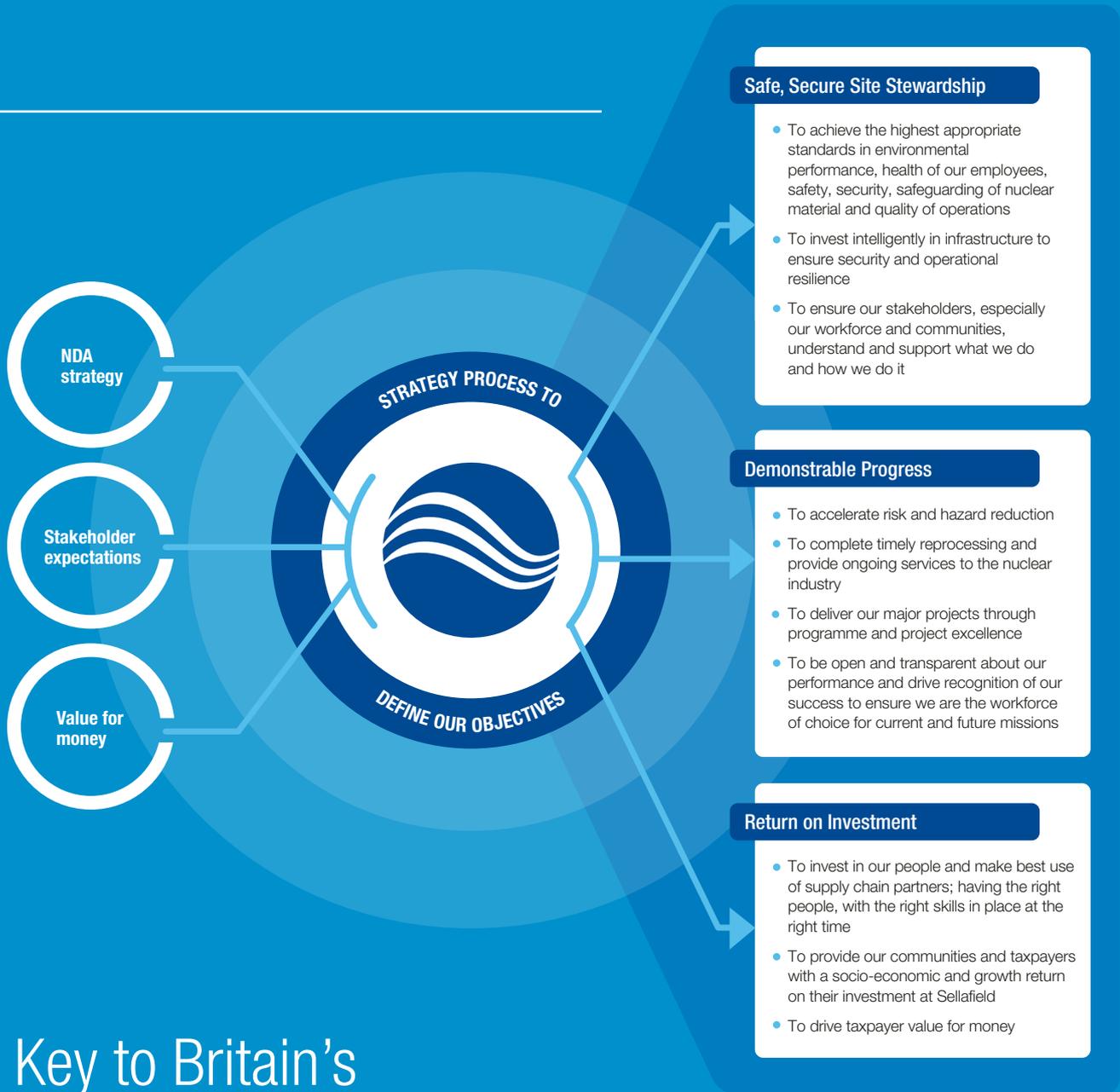
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## Vision

Through the safe and expert delivery of our mission we will be recognised as an efficient, honest and hardworking organisation that will play a significant role in Britain's energy future.

## Mission

To deliver safe, secure site stewardship whilst demonstrating value for money and urgency in the reduction of risks and hazards posed by Sellafield's historic facilities and wastes.



# Key to Britain's Energy Future

We will achieve our vision and mission by keeping Sellafield safe and secure, by making demonstrable progress in all of our activities and by providing a return on the investment made by stakeholders in the Sellafield site. Each of our objectives are covered in more detail in the following pages.

# Safe, Secure Site Stewardship

## Strategic Objective 1

To achieve the highest appropriate standards in environmental performance, health of our employees, safety, security, safeguarding of nuclear material and quality of operations

### Strategy

The safety of the site, our employees and the protection of the environment is a core value for Sellafield Ltd.

The safety and security of the Sellafield site and our employees continues to be our number one priority. The strategy will see us continue our programme of improving nuclear safety using the best available techniques from around the world, including the experience we gain through our membership of the World Association of Nuclear Operators (WANO).

Existing programmes which are designed to protect and improve the health and safety of our employees will continue and will be supplemented with campaigns to target specific aspects of health and wellbeing.

Our care for the environment is a core value and will be embedded in all of our activities from design through to operations and decommissioning. Our integrated waste strategy is underpinned by detailed supporting strategies for each nuclear waste stream; low, intermediate and high. These strategies give priority to reducing any risk to the environment, align with the UK government's discharge policy and are based on the waste management hierarchy of avoid, minimise, reuse, recycle, with disposal being the last option.

## NDA strategy alignment

- Business Optimisation

- **Integrated Waste Management** ▶

- **Nuclear Materials** ▶

- Site Restoration

- Spent Fuels

- **Critical Enablers** ▶

### Health, Safety, Security, Safeguards, Environment and Quality

NDA Objective: To reduce the inherent health, safety, security, safeguards and environmental risks associated with the nuclear legacy, and encourage high standards in operational health, safety, security, safeguards, environmental and quality performance.

The NDA's mission is founded on ensuring safe operations, whilst remediating hazards, reducing risks and restoring the environment at each of our sites. Operational responsibility for health, safety, security, safeguards and protection of the environment during delivery of the mission and for compliance

with appropriate regulations lies with our contractors, the individual Site Licence Companies.

### Integrated Waste Management

NDA 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.

### Nuclear Materials

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

## Delivery in action



### ACEMAN

Accident free, Control dose, Event free, Meet commitments, Attend and use training, Nil rework.

**ACEMAN is a human performance tool that we use to help teams identify and recognise the barriers that they face daily when completing their work. Teams discuss these barriers and identify solutions where possible or escalate up through the management structure for resolution.**

An organisation as large and complex as ours needs to maintain a line of sight across all levels of our organisation and across all of our activities. ACEMAN is one of the visual management tools that we use to help us do this. Regular ACEMAN discussions also contribute to a positive safety culture.



### Injury Prevention

We use the MoveSMART® occupational injury prevention programme which raises safety awareness and aims to ease strain and stresses on the body to help prevent injuries, particularly soft tissue injuries.

Our employee led peer to peer observation programme continues, reinforcing safe behaviours and preventing unsafe acts and injuries.

Our wellness programme focuses on proactive health and lifestyle improvements, prevention of soft tissue injuries and enhancing employee wellbeing.

Focus on injury prevention has seen significant reductions in lost time accidents, with 2012/13 performance being our best since records began.



### Liquor Activity Reduction

Within one of our Legacy Ponds and Silos buildings, the Magnox Swarf Storage Silos, we have successfully reduced the radioactivity levels of the liquor held in the facility using existing ion exchange equipment at Sellafield.

This project is a key part of the overall reduction of risk from the building and has been achieved without increasing environmental discharges from the site; demonstrating both risk reduction and environmental care.

## ► Key to Britain's Energy Future

We are committed to nuclear safety excellence and delivering a strong nuclear safety culture.

Our highest value at Sellafield Ltd is placed on safety. It covers everything from keeping ourselves and others safe, to safe operations, safeguarding nuclear materials, reducing risk and hazards and stewardship of the environment.

Through disciplined operations in all aspects of safety we will keep ourselves, our environment and our communities safe.

Every day we have the opportunity to demonstrate that it is possible to operate and clean up a complex nuclear site with due care for our people, the community and the environment.

Over the past forty years, we have worked hard to reduce the environmental impact of our operations at Sellafield. Overall, our discharges from the site have reduced by a factor of approximately 1,000 since their peak in the 1970s.

This reduction has been achieved through abatement technology which was pioneered at the site.

# Safe, Secure Site Stewardship

## Strategic Objective 2

### To invest intelligently in infrastructure to ensure security and operational resilience

#### Strategy

The requirement to safely and securely manage nuclear material in above ground storage at Sellafield will continue for many decades to come.

In recognition of this custodianship, and in line with their ongoing commitment to the safety of Sellafield, the government and NDA are investing in the security of the site.

Our strategy of maintaining and improving the site's infrastructure and assets includes a range of investments in security, emergency management, resilience and infrastructure and also includes our response to recommendations post-Fukushima.

Our strategy is also based on National Objectives Requirement and Model Standards (NORMS), which are issued by our regulator and is continually reviewed against the latest information on the changing nature of domestic and international threats.

Investments in the site will be assessed against the value added to our operations and resilience and the full life of the assets, using the British Industry Standard Publicly Available Specification (PAS) 55 model. This will ensure that the level of investment is appropriate and that we are making best use of the money given to us by the NDA.

An extensive programme of training and exercises will continue to provide an opportunity for our employees to rehearse their response in the event of an emergency at Sellafield and will identify areas for improvement.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- **Site Restoration**
- Spent Fuels
- Critical Enablers

#### Site Restoration

NDA 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.

## Delivery in action



### Guard Force

We have deployed a Guard Force for deployment on the Sellafield site.

The Guard Force complements the Civil Nuclear Constabulary (CNC), which continues to form part of our security arrangements on the Sellafield site, and complete a range of duties for us including searching and controlling access into and out of the Sellafield site.



### Modern stores

We will continue to invest in modern fit-for-purpose stores and facilities to ensure that we safely and securely manage nuclear materials at Sellafield. A recent example of this investment is the Sellafield Product and Residues Store.

With over 36,000 cubic metres of concrete, the same amount of steel as the Eiffel Tower and enough cable to stretch from London to Paris, the facility incorporates some of the most advanced nuclear security features.



### Emergency preparedness

We have robust arrangements in place to respond to the unlikely event of a major incident at Sellafield.

The effectiveness of our emergency response programme is continuously assessed through a series of emergency exercises, both locally and nationally.

We routinely test our emergency arrangements through training and response exercises. These exercises are based around many scenarios including accidents, radiological releases and security threats.

The scenarios are agreed with the Office of Nuclear Regulation (ONR) and test both the management of an incident as well as the employee response.

## ► Key to Britain's Energy Future

Our response to the recovery operations at Fukushima following the devastating tsunami in Japan in 2011 has included the transportation of vital supplies and our technical expertise.

Using our emergency response teams and processes, in the immediate aftermath of the tsunami we shipped ten drums of specialist ion exchange medium from one of our legacy ponds so that the site could start its water clean-up activities early.

We continue to support Fukushima together with the NDA and specialist UK based supply companies under agreement between the Japanese and UK government. This builds on our decommissioning and waste management experience together with equipment and knowledge provided by specialist manufacturers which have been used on decommissioning projects.



# Safe, Secure Site Stewardship

## Strategic Objective 3

### To ensure our stakeholders, especially our workforce and communities, understand and support what we do and how we do it

#### Strategy

By its nature, the work that we do at Sellafield is complicated. It isn't easy to understand technical processes within nuclear facilities and programmes of work that stretch beyond our lifetimes.

Our strategy will see us continue with our commitment to provide information on all of our activities in an open and transparent way.

Our success in delivering our vision and mission for Sellafield relies on our internal and external stakeholders understanding fully what we need to achieve, by when, and how we will do it.

Formal engagement with external stakeholders and regulators will continue to be managed centrally by our Stakeholder Relations and Strategy teams and will be underpinned by our commitment to 'no surprises.'

Internally, all have a role to play. Line managers have the responsibility to ensure that teams understand fully how their work contributes to the overall success of the organisation, the key milestones that we are all working towards and how any improvement programmes are progressing.

For our employees it's important that they know how to contribute to our delivery and how both their programme and the business overall is performing. They are encouraged to get actively involved, take the opportunity to ask questions and make suggestions that could improve performance.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- Site Restoration
- Spent Fuels
- **Critical Enablers** ▶

#### Public and Stakeholder Engagement and Communications

NDA Objective: To build and maintain the support, confidence and trust of the public and stakeholders.

It is important that NDA decision-making is informed by a diverse range of views and that the rationale for major decisions and the processes by which they are reached is clear. We therefore regard openness, transparency and effective public and stakeholder engagement and communications as key to building the support, confidence and trust necessary for us to deliver our mission.

## Delivery in action



### Effective communications

Our strategy of providing information to internal and external stakeholders on the basis of avoiding surprises will continue.

A disciplined approach to communications will ensure that information is made available in a timely manner and in a format that is appropriate to the audience. The disciplined communications framework sets out who is responsible for engaging with our various stakeholder groups and will prevent duplication of effort; the accuracy of information provided and will facilitate feedback from stakeholders back into the business.



### Employee engagement

Employee understanding of, and commitment to, our plans and activities, is key to the success that we can expect to achieve together. We provide a range of means to inform our employees about organisational performance, strategy and priorities, and the contributions we all make. We seek to involve our employees in the organisation's dialogue, and in shaping our engagement through discussions, briefings, our Journey to Excellence programme and interactions with the leadership team.

We aim to inspire our employees to commit and contribute to continuous improvement and help forge a place in Britain's nuclear future for them and future generations.

### Union engagement

Unions play an important role in our organisation and we welcome a healthy and challenging relationship with them to ensure we do what's best for the company and our workforce.

We have structures in place so that union representatives and managers at all levels can discuss tactical as well as strategic themes and issues. We are committed to early consultation locally on issues that directly affect the workforce and we have a formal consultation process in place to ensure the right level of engagement on company-wide matters. At times, it's fair to say, we have not engaged as well as we could and we are working to improve this.

## ► Key to Britain's Energy Future

### 3m<sup>3</sup> boxes

Britain's Energy Coast vision for West Cumbria is as the 'centre for excellence', the go-to place for all things nuclear and energy related.

Key to success is attracting new opportunities and understanding how our local supply chain could maximise benefit from these openings.

We are developing our responsible procurement philosophy to help create the right environment for local businesses to grow and flourish.

Creating that environment is a complex matter, and relies upon close working with a range of stakeholders including the NDA, central government, local government, Britain's Energy Coast and supply chain. We are working with them on a pilot project, procurement of 3m<sup>3</sup> boxes to package waste coming out of the decommissioning programme.

Understanding the aspirations of our local community and matching these to our future business and skills needs is the starting point of developing the best procurement strategy. As a result of this engagement, we have embedded direct socio-economic criteria into the 3m<sup>3</sup> box Invitation to Tender and will evaluate tenders against weighting factors that balance delivery, quality and cost with socio-economic considerations.

# Demonstrable Progress

## Strategic Objective 4

### To accelerate risk and hazard reduction

#### Strategy

Our strategy is to mitigate and then eliminate the risks posed by the large accumulations of nuclear waste in decades-old facilities at Sellafield, particularly those in the legacy ponds and silos classified as 'intolerable risk'.

The challenges are substantial: the existing storage facilities are aged and deteriorating and the present condition of the nuclear waste in those facilities is uncertain. In addition to the intolerable risk facilities, there are numerous other facilities at Sellafield that are no longer in use, that present significant potential hazard, and must be safely decommissioned.

Activities continue to characterise the waste stored, keep the existing facilities safe and secure, and plan, design and build new systems and equipment and structures to retrieve, package and store the hazardous

material. The retrieved waste will be sent to either permanent disposal or to modern interim storage facilities suitable for extended-term monitoring and storage.

Key to success in accelerating risk reduction is the application of 'special arrangements' – innovative, fit-for-purpose technical methods and management practices that balance the risks of necessary retrieval actions with the longer term risk of inaction or delayed retrievals.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- **Site Restoration**
- Spent Fuels
- Critical Enablers

#### Site Restoration

NDA 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 at Sellafield as well as other significant legacy risks. 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.

## Delivery in action



### First Generation Magnox Storage Pond

The special arrangements approach was first piloted on this programme, leading to a revised strategy for fuel movements and retrieval with a significantly improved risk profile. A new facility for storage of retrieved sludge has been built and is being readied for operation.

Work is under way to refurbish existing equipment and provide new equipment for retrievals, to refine detailed planning and to ready the pond for full-scale retrieval operations. In parallel, ongoing development work is exploring the adaptation of new technology for sludge retrieval.



### Magnox Swarf Storage Silo

Work is proceeding on manufacture of three large machines for removal of legacy nuclear materials from this huge storage facility – when installed, the machines will be able to operate simultaneously, retrieving material from different sectors.

Delays have been sustained in the design and installation of the new facility for treatment of much of the waste to be removed; for that reason, a separate, simpler system, suitable for some of the material, is being designed and will be installed in time for use as soon as the retrieval equipment is in place.



### Pile Fuel Cladding Silo

This is one of the oldest facilities on site and it presents difficult structural and configuration challenges, demanding an imaginative retrieval approach. One has been selected, and work is proceeding on design and fabrication of the large scale, complex retrievals equipment.

In anticipation of the installation of the new equipment, major structural changes and equipment, including the installation of a new control building and a very large crane system, have been accomplished. This ambitious installation project was achieved safely, a success that garnered global construction industry recognition.

## ► Key to Britain's Energy Future



An aerial view of the Sellafield site in the 1940s.

Sellafield is home to some of the oldest buildings in the UK nuclear industry. We refer to them as our Legacy Ponds and Silos. These facilities were constructed in the 1940s and supported the original Windscale reactors and then the first generation of Magnox nuclear power stations.

The Legacy Ponds and Silos were not constructed with decommissioning in mind. There is no blueprint for how to clean up these facilities or how to treat the waste that will be retrieved from them.

Through the decommissioning of these facilities we are delivering against our customer's primary mission and reducing the risks and hazards at Sellafield. We are also designing and developing technologies and processes to safely treat and store nuclear waste that could be used by the wider UK and global nuclear industry.

# Demonstrable Progress

## Strategic Objective 5

### To complete timely reprocessing and provide ongoing services to the nuclear industry

#### Strategy

The strategy for managing spent nuclear fuel has been set by the NDA following a period of public consultation.

The strategy for Magnox fuel is to reprocess all spent Magnox fuel as early as possible including any fuels which are compatible with Magnox reprocessing from the Dounreay nuclear site in Scotland.

The strategy for oxide fuel is to complete the Light Water Reactor fuel and Advanced Gas-cooled Reactor (AGR) contracts as soon as possible which will see the end of reprocessing with the Thermal Oxide Reprocessing Plant (Thorp).

Any future receipts of fuel on to the Sellafield site will be placed in long term storage pending future policy decisions on management, currently assumed to be disposal.

The timely completion of reprocessing activities at Sellafield is dependent on the reliability of plant and equipment on the site, some of which is in its sixth decade of operation. We will use best practice established by recognised external sources where appropriate to improve our operational performance.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- Site Restoration
- **Spent Fuels**
- Critical Enablers

#### Spent Fuels

NDA 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 AGR power stations, and seek to optimise value from our spent fuel management contracts.

## Delivery in action



### Magnox Reprocessing

Magnox Reprocessing Plants first processed fuel in 1964 and have operated every year since then, reprocessing more than 50,000 tonnes of spent Magnox fuel.

Processing the remaining fuel from shut-down stations and the last operational Magnox reactor will be completed by 2020. The focus of our improvement programme is on preventing the failure of old or obsolete equipment which could prevent the fuel from being reprocessed.



### Thorp

Thorp has been reprocessing spent oxide fuel since the 1990s. The facility has generated a substantial income for the UK and the revenue from the plant continues to contribute toward the cost of cleaning up Sellafield.

Our strategy is to invest in pond storage equipment within Thorp. This would support the possible life extension of the AGR station by providing a secure and safe route for spent fuel.



### Life beyond reprocessing

By the end of 2019, all reprocessing operations will have come to an end at Sellafield.

This however, does not spell the end for these plants; as they move into the Post Operational Clean Out (POCO) phase we will require a skilled nuclear workforce for many years to come.

Operations and maintenance support teams will be required to support the operational plant areas, modifications to plant for POCO, asset and safety case maintenance and transition. Many other disciplines will still be required to carry out work on the plants.

In summary, there will still be a lot of work to carry out beyond reprocessing; to carry out that work we require skilled people.

## ► Key to Britain's Energy Future



Spent nuclear fuel being delivered to the Fuel Handling Plant at Sellafield.

The continued safe operation of our reprocessing facilities at Sellafield is not only a key part of our mission on behalf of the NDA, it is an essential enabler to the operation of the UK's current nuclear fleet.

Success in our spent fuel management programme will see us:

- Carry out efficient, predictable operational performance
- Meet the demands of our reprocessing contracts and customer expectations
- Demonstrate that our workforce are the experts at world class operational delivery

# Demonstrable Progress

## Strategic Objective 6

### To deliver our major projects through programme and project excellence

#### Strategy

Our primary mission at Sellafield is the accelerated clean-up of our legacy facilities. In order to complete these and other decommissioning projects, it is necessary to design, construct, commission and operate new waste treatment facilities.

The development of which is challenging at Sellafield due to the compact nature of the site which can make construction difficult. There is no 'off-the-shelf' solution that we can replicate.

As challenging as construction is at Sellafield, we must improve the consistency of our project execution.

Our strategy to improve our performance in programme and project delivery uses the experience gained from nuclear projects and international best practice.

The approach:

- Improves programme delivery, in particular at the early studies phase of projects, so as to meet the objectives set for the programme
- Improves Sellafield project management and design capability to manage complex 'first of a kind' projects
- Works with the supply chain to increase the nuclear capability, particularly in design and fabrication, to meet the increased demand from the site and potentially across the UK

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- **Site Restoration**
- Spent Fuels
- **Critical Enablers**

#### Site Restoration

NDA 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 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.

#### Critical Enablers

NDA 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.

## Delivery in action



### Simplified design

We are delivering a purpose-built above ground nuclear waste store at Sellafield. This project includes the fit-out of an existing building and the construction of a new facility. Combined, these buildings will handle radioactive waste which is retrieved from our high hazard and risk reduction projects.

Following a period of review the project has been simplified from its original design to reflect new information available about the waste that will be treated in the facility.



### Sharing best practice

We have a well established programme to improve consistency across our project delivery which includes increasing the quality of our project specifications, greater engagement with the supply chain, extensive training for our project managers and a drive to bring additional resource and capability into the business. We will build on this programme of improvements to implement the recommendations made by the National Audit Office following their review in 2012.



### Early engagement

We are actively looking at how we can engage our supply chain as early as possible on work packages at Sellafield. One solution already being implemented is the creation of longer term framework agreements which provide a platform for early engagement offering the potential for development and innovation that produces cost-effective and technically excellent solutions.

## ► Key to Britain's Energy Future



The construction of a retrievals building is a key step in the programme to empty one of our legacy silos.

Our performance in project management has been the subject of close scrutiny and we can rightly expect that interest in our performance and improvement to continue.

Our ability to execute projects effectively and efficiently is key to the future success of the Sellafield site. The site will be home to many new facilities and stores in the coming decades and we must ensure that they are available when they are needed.

The nuclear waste management processes that we will design and build at Sellafield are not only critical to our own decommissioning projects but could also be used by the wider UK and global decommissioning industry.

# Demonstrable Progress

## Strategic Objective 7

### To be open and transparent about our performance and drive recognition of our success to ensure we are the workforce of choice for current and future missions

#### Strategy

For more than thirty years, we have delivered against a commitment to provide information about our operations at Sellafield in an open and transparent way. In the past this included the development and operation of a visitors centre and coach tours of the site for the general public.

Although increased security arrangements mean that we are no longer able to take the public on to the site, we continue to tell the Sellafield story. We provide information on our activities through our website, through publications and through the provision of a 24/7 media service.

We are committed to promoting our successes and the achievements of our facilities, teams and individuals. This promotion will range from stakeholder engagement through to technical presentations and industry events so that we can share our experience and expertise with others who are facing the same or similar challenges.

Openness and transparency also includes sharing information with employees, our customer, regulators, stakeholders and the media when we haven't achieved what we hoped to or when unexpected events take place.

By openly sharing information with our internal and external stakeholders on our plans, progress and improvement plans, we will continue to create an environment of trust and two-way dialogue that is crucial to our long term success.

Our strategy includes the development of our community outreach programme to help improve understanding of what we do and how we do it.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- Site Restoration
- Spent Fuels
- **Critical Enablers** ▶

#### Public and Stakeholder Engagement and Communications

NDA Objective: To build and maintain the support, confidence and trust of the public and stakeholders.

It is important that NDA decision-making is informed by a diverse range of views and that the rationale for major decisions and the processes by which they are reached is clear. We therefore regard openness, transparency and effective public and stakeholder engagement and communications as key to building the support, confidence and trust necessary for us to deliver our mission.

## 7

## Delivery in action



### Closing gaps in performance

Our Corrective Action Programme (CAP) is all about helping us better meet industry standards by improving the way we continually identify, learn from, and close performance gaps. The benefits of CAP are higher levels of safety, performance and efficiency – by embedding industry-leading processes, solving company-wide issues with company-wide solutions, and greater oversight and integration of performance improvements.



### Stakeholder scrutiny

We will continue to provide regular updates, information and briefings to the West Cumbria Sites Stakeholder Group (WCSSG) as part of our stakeholder engagement activities.

The WCSSG is an independent body whose role is to provide public scrutiny of the nuclear industry in West Cumbria by providing an active, two-way channel of communication between the site operators, the NDA and local stakeholders.



### Sellafield Plan

In August 2011, we published the Sellafield Plan which set out details of every programme of work at Sellafield, how we will complete these programmes and when.

Launched in partnership with the NDA and Nuclear Management Partners, the plan is supported by the annual publication of specific targets which must be met in order for us to succeed.

By making this information public we hope that it is easier for interested parties to understand what we do at Sellafield and also so that they can assess for themselves the progress that we are making.

## ► Key to Britain's Energy Future

In his report (July 2012) into the events at Fukushima in 2011 (Japanese earthquake and tsunami: Implications for the UK nuclear industry), Mike Weightman, HM Chief Inspector of Nuclear Installations, included a series of recommendations for the UK nuclear industry.

Recommendation 4 said that 'both the UK nuclear industry and ONR should consider ways of enhancing the drive to ensure more open, transparent and trusted communications, and relationships, with the public and other stakeholders.'

Our strategy of openness and transparency will seek to increase and improve the way that we communicate about Sellafield and in doing so will support the broader UK nuclear industry's effort to maintain and increase trust and confidence in the industry.

# Return on Investment

## Strategic Objective 8

### To invest in our people and make best use of supply chain partners; having the right people, with the right skills in place at the right time

#### Strategy

Sellafield is key to the UK nuclear capability and will continue to play an important role in the future. Locally, the site will continue to provide significant levels of employment both directly and through the supply chain.

Our strategy recognises that core skills and knowledge of the Sellafield Ltd workforce will need to adapt to changing circumstances and that it needs to be used in partnership with the skills and knowledge of supply chain partners.

This approach ensures that our strategy will recognise that there are some things that our workforce does best and there are some things that the supply chain can do better.

Key features of our strategy are:

- Reskilling and development of the Sellafield Ltd workforce
- Investment in leadership
- Developing the supply chain
- Workforce mobility
- Knowledge retention
- Apprentices

## NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- Site Restoration
- Spent Fuels
- **Critical Enablers**

### Critical Enablers

NDA 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 and supply chain development, to consider the socio-economic aspects of its programme and to maintain effective stakeholder engagement.

## Delivery in action



### SMP Mobility

In August 2011, the decision was taken to close the Sellafeld MOX Plant. Although the Post Operational Clean Out phase of the plant closure will take a number of years to complete, the announcement meant an immediate reduction in the number of employees needed in the facility.

Working with the trade unions and human resources, we embarked on a programme to mobilise as many of our employees from the plant to other work buildings and projects as possible. In some instances this involved retraining employees to deliver completely new roles.



### Resourcing

Ensuring that we have the right people, with the right skills, available at the right time is a key component of our Excellence Plan. The Excellence Plan sets out the things that we need to improve to deliver our strategy. It will help us to identify changing resource requirements in employee numbers, opportunities to utilise the skills of our supply chain and also specific areas where we can start to nurture and develop new skills and capabilities.



### Next Generation

Our commitment to growing the capability of the Sellafeld Ltd workforce includes our ongoing investment in new employees. In 2012 we announced the recruitment of more than 500 new employees at Sellafeld, which will be followed by a further recruitment drive in 2013.

Our investment in apprentice training will also continue. In the last few years, not only has the number of apprentices that we recruit increased, we have also worked with our training partner, GENII to develop new courses and specialist skills, including business administration.

## ► Key to Britain's Energy Future

Key developments in the UK's nuclear history have been led by Sellafeld. From the site's infancy and its role in supporting the national defence priorities, through to harnessing the power of the atom and developing safe treatment and storage options for nuclear waste.

Throughout the site's history, our expert employees have been called on to support the wider UK and global nuclear industry.

More recently we have been called on to support the recovery operations under way at the Fukushima plant in Japan following the devastating events of 2011.

We believe that this leadership role can continue with our employees sharing their skills and expertise in decommissioning and waste management for many years to come.

# Return on Investment

## Strategic Objective 9

### To provide our communities and taxpayers with a socio-economic and growth return on their investment at Sellafield

#### Strategy

Sellafield is not just a large nuclear site that sits on the edges of the community. We are part of our community.

Our partnership approach remains part of our strategy for the site and will see us continue to play a full part in the socio-economic development and regeneration of West Cumbria.

We will continue to invest the £3m that the NDA gives to us every year for socio-economic investment. We will also seek to offer the skills and capabilities to community projects as appropriate. Our employees will continue to be supported as we pay for their time to carry out vital community roles such as councillors, school governors, emergency service volunteers and many more.

Our commitment to ensuring that our communities and taxpayers receive a return on their investment is rooted in our desire to make the best use of every pound given to us to deliver our mission. We will continue to help the development of our supply chain. A strong nuclear supply chain will not only be able to help us to deliver our mission at Sellafield, but will also be well placed to gain a share of the multi-billion pound nuclear decommissioning market around the world.

We will not impose solutions but will seek to work with all interested parties to create sustainable economic growth and to help make West Cumbria an attractive area for investment.

#### NDA strategy alignment

- Business Optimisation
- Integrated Waste Management
- Nuclear Materials
- Site Restoration
- Spent Fuels
- Critical Enablers

#### Supply Chain Development

NDA Objective: To optimise the NDA supply chain to develop an affordable, cost-effective, innovative and dynamic market to deliver our mission.

Given the scale of NDA spend, a vibrant supply chain is vital to secure value for money, reduce risk and optimise delivery of our mission. This depends on having effective procurement processes and clear alignment between the aims of the client and supply chain companies. As a key player in the nuclear supply chain, we are in a strong position to link with other nuclear clients and support government supply chain initiatives.

#### Socio-Economics

NDA Objective: To support the creation of dynamic, sustainable local economies for communities living near our sites.

The NDA is a major stakeholder in the communities in which it operates, and its activities can have a significant social and economic impact. We are obliged to take account of these impacts, which we do by actively supporting these communities and those organisations formally accountable for economic development.

## Delivery in action



### Supply chain working group

Key to delivering a socio-economic return on taxpayers' investment is creating a shared vision between the nuclear industry, our supply chain and local government.

We joined with our three local authorities to set up the Supply Chain Working Group to discuss all supply chain and local socio-economic issues, identifying opportunities and resolving challenges.

This new approach to working together should deliver mutual benefit for all involved and provide a mechanism for checking delivery of outputs against promises.



### Britain's Energy Coast

Britain's Energy Coast (BEC) was established in 2009 with the mission of transforming Allerdale and Copeland (West Cumbria) into a diverse, resilient and low carbon economy.

BEC has evolved into a public-private partnership consisting of Nuclear Funding Partners, local authorities (Allerdale Borough Council, Copeland Borough Council and Cumbria County Council) and independent members from the private sector with experience in sectors of importance to the local economy.

Together with Nuclear Management Partners and the NDA, we provide £6m of funding to BEC every year.



### Small and medium sized enterprises

Working with the small and medium sized enterprises (SMEs) in our supply chain provides a way of boosting local economies by ensuring that locally based firms benefit from big infrastructure and construction projects.

As well as the obvious socio-economic benefit to our local communities, a strong local supply chain provides a great business benefit to Sellafield Ltd. We know that by investing money with SMEs we grow the supply chain's capability, which brings huge benefits for us as we tackle our complex decommissioning challenge.

That's why we fully support the NDA's commitment of doubling the amount of money with SMEs so that it reaches 20% of its entire sub-contracting budget by 2015. We will actively encourage our tier two suppliers, who are often large multinational companies to do the same.

## ► Key to Britain's Energy Future

Workington based engineering firm Stobbarts has used its core work at Sellafield to expand from an 18 man outfit ten years ago to a 200 strong company servicing industries as diverse as construction and solar panel installation.

The company presently delivers minor civil works on the Sellafield site, amounting to an annual value of between £15 million and £20 million and acts as a hub for other local tier 4 contractors.

The mainly local workforce has used its skills and energy to help tackle a wide range of difficult challenges. These include the maintenance of Sellafield's ageing infrastructure and rebuilding projects elsewhere in the community following the 2009 floods.

# Return on Investment

## Strategic Objective 10

### To drive taxpayer value for money

#### Strategy

The NDA invests the majority of its annual budget on our work programmes at Sellafield. Their investment in Sellafield as their priority site continues to grow meaning that we are responsible for the effective use of over £1.7bn of taxpayer money every year. This NDA investment in Sellafield has increased by 70% since 2005.

Demonstrating value for this investment and improving our productivity is a key part of our strategy.

The NDA's value framework defines where customers judge value from activities carried out at Sellafield. The framework uses the following criteria; Affordability (short, medium and long-term), Value for Money, Safety and Environmental Impact, Deliverability, Socio-Economic and UK Government Policy Impact.

Our strategy work within this framework ensures maximum value to the UK taxpayer by:

- Delivering NDA commercial contracts at lowest cost thereby providing income to NDA and reducing the cost to the taxpayer
- Carrying out additional work at Sellafield at marginal cost thereby reducing the cost at other NDA sites

- Making the right investments in the assets at Sellafield to reduce lifetime costs
- Improving efficiencies across the company to reduce capital and operating costs
- Creating future opportunities in nuclear waste management and decommissioning through innovative solutions developed at Sellafield able to be developed by the supply chain in a worldwide market

#### NDA strategy alignment

- Business Optimisation ▶
- Integrated Waste Management ▶
- Nuclear Materials ▶
- Site Restoration ▶
- Spent Fuels ▶
- Critical Enablers ▶

In 2013/14 Sellafield Ltd will receive more than £1.7bn of the NDA's total £3.2bn budget, representing a further increase in the amount of money invested by our customer at Sellafield.

Driving taxpayer value for money applies to all of our activities across Sellafield Ltd from our commercial operations, decommissioning and waste management activities to our support functions.

Through the effective and efficient use of the money given to us we can accelerate our risk and hazard programmes while also increasing our customer's confidence in our ability to deliver value for money.

# 10

## Delivery in action



### Support to UK nuclear fleet

High density storage of AGR fuel is being deployed within the ponds in Thorp at Sellafield using a new design of Multi-Element Bottles.

This fuel storage project not only makes best use of the available pond storage space we have available, it also allows the extension of the UK nuclear fleet by at least a decade.



### Fuel storage

Stores which were created at Sellafield in support of the Sellafield Mox Plant, which closed in August 2011, are being used to store some fuel which has been transferred from the Dounreay nuclear site in Scotland.

Not only does this accelerate their risk and hazard reduction programme it also prevents additional costs being incurred at the Dounreay site.



### Improving efficiency and productivity

Demonstrating value and improving productivity is key to our strategy and a cornerstone of the improvements in our Excellence Plan.

In the Excellence Plan are the focus areas of the Integrated Change Programme, where we see improvements in productivity as changes start to embed. For example, operators talk about the time they are saving through our changes to instructions. Integrated work management means planning and availability are more stable and more work goes ahead as planned.

We know we have much more to do, but early feedback shows encouraging improvements in productivity.

## ► Key to Britain's Energy Future



The joint government and industry review of the UK nuclear future identified a number of areas of strength of the UK nuclear industry and considerable potential international markets in waste and nuclear decommissioning.

The report estimated that the global decommissioning market would be worth £50bn per year by 2020, with between 82 and 145 reactors retired by 2030, mostly in Europe.

Government is keen to ensure that the decommissioning of the UK's existing nuclear facilities is done in a way to deliver the skills and capacity needed to support not only the decommissioning programme but also the potential new build and plant life extension programme.

We believe that the Sellafield Ltd workforce and supply chain can play a key role in this growing nuclear market.

# Potential Rewards

The safe delivery of our vision and mission will not guarantee new missions but will enhance our chances of success.

We will not deliver our work safely because of the promise of new work; we will do it because it is the right thing to do. We will deliver what we say we will, when we say we will for our customer, because it is the right thing to do.

Through timely delivery and exceeding expectations, we can establish ourselves as experts and leaders in nuclear decommissioning, nuclear material management and nuclear waste management. We can make Sellafield Ltd and West Cumbria the obvious choice for new missions.

There are many new missions out there that we can be part of, including:

### Supporting additional NDA missions

- Plutonium recycling and management
- Support for Ministry of Defence decommissioning
- Services to the nuclear industry

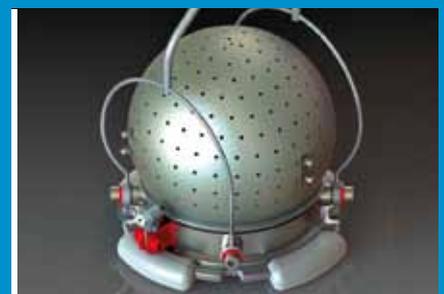
### Leading the UK capability in decommissioning and waste

- Partner with academia, Small to Medium sized Enterprises (SMEs) and the National Nuclear Laboratory
- Technology demonstrators
- Access to Sellafield Ltd knowledge
- New UK skills growth

### Long-term structure for growth

- Strategic partners in different segments of industry
- Divisionalised more autonomous decision making
- Developing the opportunity to extend our customer base

To achieve any of these rewards we must adapt, we must deliver and we must continually improve.



### Leading the UK capability in decommissioning and waste

Working in partnership with National Nuclear Laboratory we are already demonstrating new technology such as the Rad Ball at Sellafield



### Long-term structure for growth

We are working closely with strategic partners from our supply chain to accelerate working in legacy ponds and silos



### Journey to Excellence

The people of Sellafield Ltd will be recognised for resolving the UK's nuclear legacy.



OVERVIEW

SAFE, SECURE SITE STEWARDSHIP

DEMONSTRABLE PROGRESS

RETURN ON INVESTMENT

POTENTIAL REWARDS



“The strategy developed by Tony and his team underpins the priority for Sellafield; safe, successful and accelerated clean up. As Parent Body Organisation, Nuclear Management Partners welcomes the strategy and will support Sellafield Ltd in delivering the Nuclear Decommissioning Authority’s mission.”

Tom Zarges Chairman, Nuclear Management Partners



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