

Capenhurst site overview

# The UK's primary uranics management facility



**Capenhurst is due to become the UK's first nuclear site to complete its main plant decommissioning programme – and on the way has delivered the biggest demolition projects ever undertaken in the UK nuclear industry.**

Its management of the final stages of decommissioning offers other sites an insight into the challenges they will face and provides a blueprint for success.

Capenhurst employees have also acquired valuable skills and experience in waste characterisation, recycling and disposal. Working in partnership with local stakeholders and regulators, the site has become renowned for safe nuclear decommissioning.

Capenhurst also receives and stores safely Magnox depleted uranium from Sellafield and Chapelcross. It is the UK's primary safe and secure storage facility for depleted uranium and uranium hexafluoride (uranics), products that are potentially reusable in the nuclear fuel cycle.



Capenhurst site



# Pioneering nuc

**The Capenhurst site is split into two: one side which is owned by the Nuclear Decommissioning Authority (NDA) and the other by Urenco UK Ltd (UUK). The NDA side is operated by Sellafield Ltd and includes more than 13km<sup>2</sup> of available internal and external storage space.**



# lear clean-up



The site's excellent safety record has been underpinned by the pioneering work of the Safety 1st team, a group of shop floor volunteers who lead and manage site safety.

Capenhurst prides itself on being able to do things more easily, to think radically and to build a future for the site around a shared vision.

# Maximising assets, growing our business

Sellafield Ltd's team at Capenhurst is working hard to create a new future for the site in line with the site's vision: maximising assets, growing our business.

The site's vision is underpinned by these aspirations:

- To become an NDA flagship site
- To work in partnership with Urenco UK Ltd
- To become a commercial success
- To continue with the industry-leading Safety 1st programme
- To make Capenhurst a place where people love to work
- To get things done more easily

*"Capenhurst is working hard to create a bright new future for its employees focused on our vision of maximising assets, growing our business. This will accelerate the reduction of the site's hazards and increase value to the UK taxpayer."*

Phil Malem, Head of Site



The Sellafield Ltd team believes that Capenhurst is a national asset that is crucial to the fulfilment of the NDA's programme of nuclear clean-up. It believes the site can help the NDA maximise its assets, which includes uranic material, land and plant, in order to generate income and avoid substantial future costs.

Currently the site is advancing projects that will shape its future as a leader in accelerated hazard reduction. It is examining how its assets can be managed to deliver enhanced value for the NDA, the UK taxpayer and provide a new future for the site's employees and their valuable skills.

**All parties, including the local community, will benefit from keeping the site a safe, vibrant and exciting place to work.**

Capenhurst receives and stores safely Magnox depleted uranium from Chapelcross and Sellafield. It also stores safely all the NDA's inherited inventory of uranium hexafluoride from legacy enrichment operations.





Capenhurst will continue to receive Magnox depleted uranium until 2016. It is transported by lorry and stored indoors in a controlled environment.

Uranium hexafluoride is stored in large cylinders and could be used in the nuclear fuel cycle, should the Government decide to do so.



Accelerated uranium management represents a significant opportunity for hazard reduction and cost savings. Key projects are being planned to realise those benefits.



# Creating value through innovation



*"Capenhurst's team is currently progressing major projects that could help the NDA and ultimately the UK taxpayer reduce significant long term costs associated with the ongoing management of the uranium on site. Our job is to think radically to turn these plans into delivery."*

Craig Rogers, Head of the Project Delivery Group

**Enhanced funding has been announced for Sellafield Ltd to progress the development of two major projects that will aid the delivery of accelerated hazard reduction. It is also engaged in an over-arching piece of work that is assessing the potential value and market interest in the NDA's uranium assets.**

## Asset Use Programme

The NDA has asked Sellafield Ltd to lead an integrated project that will define the future direction of the site in its post-decommissioning era. Options for using the site's assets, including its spare land, offer opportunities to avoid significant costs associated with the long-term storage and management of the uranium and could result in revenue from the disposal of the materials to the uranium market. The extent to which the NDA and Sellafield Ltd can work in partnership with the site's other licence holder, UUK, is also being explored.

Magnox depleted uranium is an asset that is also potentially reusable in the nuclear fuel cycle, subject to Government policy. It is stored safely and securely indoors at Capenhurst.

## Cylinder Handling Facility (CHF)

One of the central projects that Capenhurst is currently developing is the Cylinder Handling Facility (CHF). This will be capable of sampling and repacking the site's inventory of uranium hexafluoride into containers that are suitable for long term storage and transport off the site.

This will ensure the continued safe storage of material on site and could help avoid massive future storage costs for the material by allowing it to be transferred to alternative locations. It may even create a source of revenue for the NDA.

The construction of CHF is dependant on there being a market for the material to be reused, however, funding has been received to progress the plans up to a point short of construction.

## Export Capability Project (ECP)

ECP will focus on three areas: firstly, it will ensure that the entire stock of depleted uranium stored in mild steel drums is repackaged to provide robust containment for storage and possible future transport off site. Secondly, it will ensure that a suitable crane system is available to move the drums into an arrangement suitable for transport off the site. Thirdly, it will plan for a new railhead on the site to minimise future road journeys at the site, both for Sellafield Ltd and potentially the site's other nuclear licence holder, UUK. This could reduce carbon dioxide emissions associated with site traffic by 96%.



Capenhurst has an excellent track record of operational safety which will characterise the development of its future.

# Delivering success

## Completion of 2008/09 scheduled work

Capenhurst completed 99% of work scheduled for completion in 2008/09 and managed to make 19% savings on the original budgeted cost. This money was spent on additional improvement works and radioactive waste disposals.

# 99%



## Demolition project complete

Capenhurst has recently completed without any safety incidents, the biggest demolition project in UK nuclear history, clearing more than five football pitches-worth of valuable, versatile space.

## Capenhurst wins RoSPA award

Capenhurst has received an award from the Royal Society for the Prevention of Accidents (RoSPA) commending it for excellence in occupational health and safety. This is the third highest award that RoSPA makes on an annual basis within the chemical industry sector.



## Apprentices are welcomed to the site for the first time in 14 years

Seven apprentices have started at Capenhurst, five for engineering and two for business administration. They have embarked on a Government-backed salaried scheme lasting up to four years and integrating classroom learning with on-the-job experience.

## Innovative use of rope access

When a new fire detection system needed to be installed in the uranic storage building, Capenhurst went out to the supply chain to find the safest and most cost-effective way of doing it. They used a firm specialising in rope access to install the system in the roof of the massive building. This avoided increased radiation dose rates that would have been incurred from building scaffold platforms and overcame complex problems in accessing the roof. There were no accidents or injuries and the project was delivered substantially ahead of schedule.



**The site remains fully compliant with and certified to the internationally recognised ISO9001:2000 standard for its management system and to the latest environmental management standard ISO14001:2004.**

## Integrating charity support with business improvement

Capenhurst has launched an innovative ideas generation scheme that rewards the site's charity of the year with a pound for each idea submitted. The site is split into four teams, each of which receives a point for every idea submitted and a further 50 points if it is implemented. At the end of the year, the winning team will be rewarded with a learning from experience away day.



New ideas are assessed and implemented through the Capenhurst Workout business improvement process

**Sellafield Ltd runs Capenhurst in a way that allows those doing the work each day to suggest improvements to either processes or safety.**

# Continuous improvements

*"Our success is built on the fact that we empower all colleagues to act to improve safety or to do things more easily."*

Mike Baily, Head of Quality, Environment, Health and Safety



## Safety 1st

Safety 1st is Capenhurst's safety programme, which is now well established after four years and numerous RoSPA awards. It is managed by employees who work on the shop floor, who are most likely to encounter serious hazards. The site's safety success is based on the fact that we operate in a safety state of mind and a genuine desire to ensure no-one is harmed by our operations. Safety 1st has received many RoSPA awards and has been shared with both nuclear and non-nuclear business, such as Airbus, Nuvia and the Winfrith and Harwell nuclear sites.

The site's long-standing RoSPA success proves the value of Safety 1st as a shop floor-led initiative that drives a proactive safety culture into all daily activities.



## Capenhurst Workout

The Workout concept is used at Capenhurst to drive out inefficiency and to get things done more easily. It encourages and empowers employees to act with speed, simplicity and self-confidence.

The concept was created at GE and is based on the principle that the people in the best position to improve a business are those doing the job everyday. The process empowers employees at all levels to devise and pitch improvement ideas direct to senior managers face-to-face for an immediate decision.

The concept of Workout fits well with Capenhurst's entrepreneurial nature and ensures that an immediate positive impact is made to the site. This process is used to address almost every aspect of the site's operations to ensure continuous improvement.



Hazards and near misses are reported by a postcard system and are dealt with within a specified period of time to ensure quick action.



When Workout sessions are organised relevant employees are involved, root causes are identified and solutions are found and implemented quickly.

Capenhurst's vision commits the site to continue working in partnership with its stakeholders to ensure openness and transparency.

# Our vision





Thinking radically to find ways to reduce the site's current lifetime plan is critical to avoid long term costs and delivering the best value to the NDA and the UK taxpayer



A meticulous programme of asset care and maintenance will ensure that our facilities continue to be suitable for safe and secure uranics management



**Sellafield Ltd's vision for Capenhurst will deliver increased value to the NDA by maximising assets, growing the business and achieving the following aspirations:**

**Becoming an NDA flagship site**

We are focused on delivering our contract to operate the site, reducing hazards, generating savings and delivering projects to scope, schedule and cost.

**Maintaining the Safety 1st initiative**

We will continually refresh our approach to safety to keep our employees focused on its importance in both conventional and nuclear terms and ensuring that no-one is harmed by our operations.

**Becoming a commercial success story**

Our transition to the private sector means that a key role is to generate profit for our business, which we will achieve by using our entrepreneurial nature to find new ways of adding value to our contract with the NDA in order to earn more fee.

**Working in partnership with our stakeholders**

We will continue to explore the optimum way of working in partnership with UUK to deliver savings and value. We will also continue to be a good neighbour and work in partnership with our community, regulators and our employees.

**We will get things done more easily**

By using our business improvement process Capenhurst Workout, and harnessing the group power of the Ideas Generation Scheme, we will think radically to find new ways of delivering value to our customer and the UK taxpayer.

**Make Capenhurst a place where people love to work**

Our vision has our people at its heart and we are working hard to make Capenhurst a place where people love to work. We believe that achieving this will enrich our business and our service to the NDA.



Managing the NDA's uranics effectively will reduce hazard and costs



Planning carefully for our future will help fulfill the ambitions of our people and the NDA



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