

REVIEW  
OF THE YEAR



# Our Sellafield

Our people share their stories from **2022/23**

# Review of the year 2022/23

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# Letter from the Chair

This has been a challenging year of mixed performance, with some major accomplishments this year and some areas for improvement in the year ahead.

Our teams across Sellafield have delivered measurable progress in the clean-up of the nuclear site.

They completed our Magnox Reprocessing mission with pride and started to retrieve waste from the Magnox Swarf Storage Silo, one of the highest hazard facilities not only on the Sellafield site but in the Nuclear Decommissioning Authority's estate. Both events constitute major milestones in the lifetime of Sellafield.

These moments of progress in the delivery of our purpose to create a clean and safe environment for future generations are in contrast with some more challenging moments.

We have not met all our production targets in waste management and retrievals from Sellafield's legacy storage ponds.

These targets have been impacted by the reliability of some of our ageing facilities and by resource challenges. Improving our performance across our operational nuclear facilities is a priority for the 2023/24 financial year and the Board will support the Sellafield Ltd Executive team to achieve this aim.

The Board has been pleased to see an improvement in safety performance and the continued commitment to safety as our overriding priority.

We cannot reflect on this improvement without also recognising that Sellafield Ltd was prosecuted by the Office for Nuclear Regulation

in this financial year in relation to one of our employees being injured as a result of a fall from height in a previous year. As we said at the time of the prosecution, we must continue to work hard to ensure that safety and security at Sellafield are the very best they can be.

The Board is acutely aware of the significant investment that the Government, via the Nuclear Decommissioning Authority, makes in our work at Sellafield. Every pound we spend is a pound that is not invested in other public services, such as health, education, and care.

It is therefore right that we are taking steps to reclaim an overpayment that was made to our employees in the bonus payment for the 2022/23 financial year, and that we take steps to improve our governance arrangements to ensure that it does not happen again.

This new financial year will undoubtedly bring us more challenges and has already seen changes with Martin Chown leaving Sellafield after three years as CEO. I would like to thank Martin for his service and wish him well for the future.

I am confident that our people and supply chain partners have the skills, resilience and expertise to face the challenges ahead. The stories of their successes in this report, seeing what they have delivered over the last twelve months, gives the Board great confidence for the future.

We are also delighted that Euan Hutton has agreed to take up the role of CEO on an interim basis. With national and global nuclear expertise and more than three decades of Sellafield experience he is uniquely placed to take the site forward this year. The Board, and I personally, look forward to supporting him in the months ahead.

**Tony Meggs**  
**Chair**



**Everything we do at Sellafield is on behalf of, and is funded by, our owner the Nuclear Decommissioning Authority.**



# Letter from the CEO

In this, my first annual report as Sellafield Ltd's Chief Executive Officer, it feels right to offer a view of the future rather than a reflection of the past.

As Tony Meggs referenced in his Chair letter, there are areas where we need to improve. We must continue to hold safety – and nuclear safety above all else – as our overriding priority. We must achieve a sustainable improvement in the throughput of our nuclear facilities and make measurable progress in the clean-up of the Sellafield site.

In short, we must do what we say we will do. Because what we do at Sellafield matters.

When we look after used nuclear fuel, we are supporting the country's security of energy supply. We're helping to keep the lights on.

By packaging or repackaging the country's stockpile of special nuclear materials so that they can be safely and securely stored, we are playing a role in national security.

Every skip and container of waste we take out of our legacy ponds and silos is a reduction in the potential risk that those ageing facilities pose to the environment.

My priority, with my Executive team and with the support of the Board, is to step up the pace of safe delivery at Sellafield.

I am confident in the task ahead, that we can make the improvements that we need to make, and that we can build on the successes of the last twelve months.

At the heart of this confidence is the people who are working to deliver our purpose at Sellafield, whether they are based on the site, in our offices, or in the extended supply chain across the country. I don't think that there is a more experienced nuclear workforce and supply chain anywhere else in the world.

The employees and supply chain colleagues you'll meet in this report are just a snapshot of the capability, skills and nuclear professionalism that we have in our 13,000+ team. I am impressed every day by their resilience and their pride in our work.

I am also buoyed by one of the most impressive leadership teams in the industry, almost 200 nuclear and business experts.

Everyone has a role to play in the success of Sellafield Ltd, and I am proud to lead the organisation into its next chapter.

**Euan Hutton**  
**CEO**



# What we do

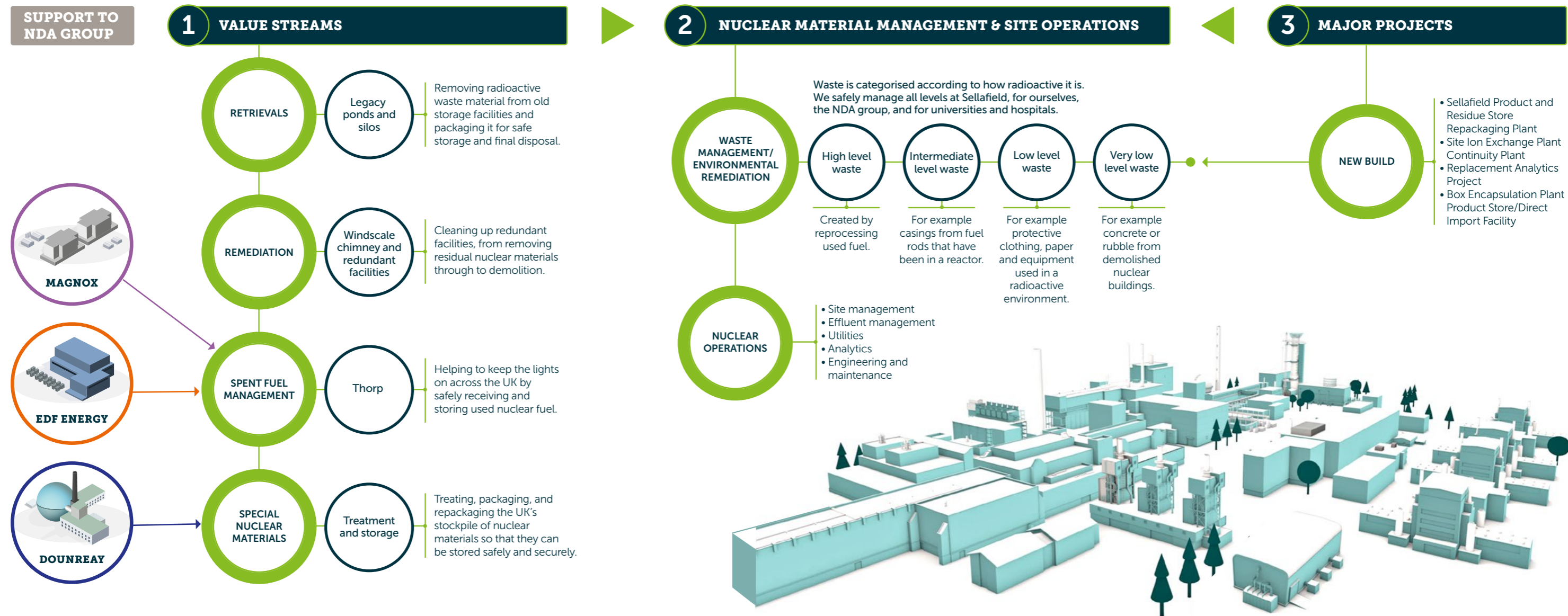
We are creating a clean and safe environment for future generations

1940s

2120s



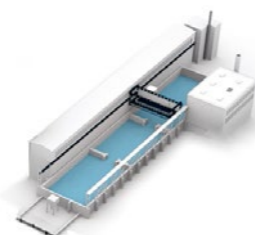
## What we do



**AN ENTERPRISE APPROACH:** Each activity relies on or supports another activity. For example...

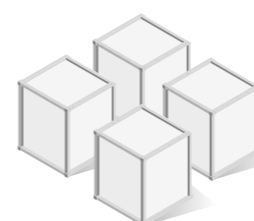
**1 PREPARE FOR RETRIEVALS**

Retrieving waste from legacy ponds and silos relies on the availability of...



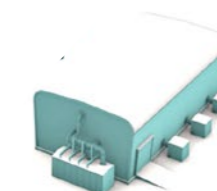
**2 DESIGN AND MANUFACTURE 3M³ CONTAINED BOXES**

...high quality, purpose built waste containers and transport flasks. In turn, those flasks require...



**3 NEW TREATMENT AND STORAGE FACILITIES**

...facilities that can receive, store and maintain the filled boxes.



# Our performance against key targets

One of the ways that we measure our progress is through our progress against key targets. These targets are agreed at the start of the financial year with the Nuclear Decommissioning Authority. The targets also form the basis of our company-wide bonus scheme, and our management bonus schemes.

Each key target is an achievement that would contribute to real progress in delivering our purpose. Typically, each target can then include a number of sub-elements which individually contribute to achievement of the overall target.

Measurement of the target can be by metric, date or other, with achievement assessed as being either Excellent, Good, or Acceptable, depending on deliver. A 'Good' rating means that we have delivered in line with our operating plan while 'Acceptable' means that we have delivered slightly behind that plan. To achieve 'Excellent' we must deliver accelerated performance.

Our performance is then modified, if necessary, based on factors such as our safety performance.

## 9 of our key targets at 'Excellent' level, including:

- ▶ Excellent environmental sustainability, including achieving:

**>70%**

waste recycling against baseline recorded

**>5%**

water use reduction and development of a water management plan

**>10%**

reduction in greenhouse gas emissions

**>600**

- ▶ Operational throughput target of overpacking >600 containers of special nuclear materials



- ▶ Retrieval of waste from the Magnox Swarf Storage Silo (see page 26 for more details)

- ▶ Schedule adherence on three of our major projects:
  - the SIXEP Continuity Plant,
  - the Sellafield Product and Residue Store Retreatment Plant,
  - and the Box Encapsulation Plant (see page 45 for more on the Box Encapsulation Plant).



# Our performance against key targets

## Bonus overpayment

An overpayment of our company-wide bonus was made this year, associated with the CEO moderation of our Pile Fuel Cladding Silo (PFCS) target which removed it from the calculation as unachievable in year, and the EDNUP target variation which determined the target as "Good".

Both targets were discussed by our Board who concluded that the PFCS target should not have been moderated and removed from the calculation and that the EDNUP target variation should not have been agreed as "Good".

The financial impact of the overpayment was £2.1m.

Every pound we spend is a pound that is not invested in other public services, such as health, education, and care.

It is therefore right that we are taking steps to reclaim an overpayment that was made to our employees in the bonus payment for the 2022/23 financial year, and that we take steps to improve our governance arrangements to ensure that it does not happen again.

We are exploring the most appropriate mechanism for reclaiming the overpayment and remain in close contact on this issue with the trade unions and with the Nuclear Decommissioning Authority.

**5** of our targets at 'Good' including:

- ▶ Achievement of 85% of our operating plan milestones
- ▶ Embedding supply chain operational excellence (see page 55 for more on our work with the supply chain)
- ▶ AGR A2 buffer

**1** of our targets at 'Acceptable'

- ▶ The successful procurement of 9 out of 10 planned Information, Communication and Technology Services by 31 January 2023.

**9/10**

**3** of our targets were missed

- ▶ A basket of targets designed to measure our operational throughput were missed due to significant plant availability issues and resource challenges. Those targets include:
  - targets in our Waste Vitrification Plants where we turn highly active waste into a solid
  - units of inventory retrieved from our legacy storage ponds
  - removal of special nuclear materials from a legacy store

- ▶ The start date for the start of retrievals from the Pile Fuel Cladding Silo was missed due to a mechanical failure on our retrieval crane (see page 28 for more information on how the crane was repaired this year).



- ▶ Electrical Distribution Network Upgrade Project (EDNUP).



# Safety



# Safety: our overriding priority

## A look at:

- How our teams are managing climate-related risk
- Our performance against nuclear, radiological, environmental and conventional safety targets
- How our teams are making our transport more sustainable
- How two of our safety graduates got people talking about working safely



## Safety: our overriding priority

**Despite an annual budget that rivals some large private sector businesses, we do not exist to make a profit. Instead, as a subsidiary of the Nuclear Decommissioning Authority, we exist to create a clean and safe environment for future generations.**



**Our mission is to safely and efficiently remove the potential risk posed by some of our buildings that are as old as the UK's nuclear industry itself, taking the contents of these buildings and putting them into safe and secure storage.**

To do that we are building on an epic scale, with one of the largest collections of national major infrastructure projects being constructed right next to existing nuclear facilities.

Some of these new facilities will also help us to continue to safeguard the country's stockpile of nuclear materials, maintaining our proud history in supporting national defence.

Elsewhere we are receiving, treating and storing all levels of radioactive waste – very low, low, intermediate and high level.

Our teams also manage used nuclear fuels, a service that helps generating nuclear power stations keep operating and in turn keep the lights on across the country.

These operations deliver a vital national service.

They also present every safety challenge imaginable. Thousands of people working at height, working to empty hazardous buildings that were never designed to be emptied, and working in the presence of radiation.

Which is why we continuously and consistently work with safety as our overriding priority, and why we consider and measure our performance in all facets of safety: nuclear, radiological, environmental and conventional.

### **Our safety performance**

In the pages that follow we have shared not only our performance in these categories within 2022/23, but also how that performance compares to previous years. Internally we used this trending to drive future improvements.

# Safety: our overriding priority

## Nuclear safety

Within our focus on safety, when making operational decisions, nuclear safety is our priority above all others. We have real time measures in place to monitor our nuclear safety and, on an annual basis, we track and report the number of Nuclear Sellafield Incident Reports (SIRs). These are nuclear events categorised as significant under our sentencing scheme.

We had no Nuclear SIRs in 2022/23, an improvement on the previous financial year.

## Radiological safety

One measure of our radiological safety performance is the number of Radiological Sellafield Incident Reports (SIRs) radiological events categorised as significant under our sentencing scheme.

There were three recorded during 2022/23, details of which can be found on page 16 of this report.

This represents a diminished performance compared to the previous financial year and will be an area of focus for us in 2023/24.

## Environmental safety

One measure of our environmental safety performance is the number of Environmental Site Incident Report (SIR) events categorised as significant under our sentencing scheme, including events where there is actual or potential for noncompliance with our environmental permits.

We saw an increase in the number of Environmental SIRs in 2022/23 compared to the previous financial year. We will seek to make improvements in the 2023/24 financial year including strengthening our environmental safety teams with additional roles.

## Conventional safety

Overall, the metrics that measure our conventional safety performance have improved this year. While we are delighted that everyone's efforts in this area over recent years has resulted in fewer conventional safety incidents, we still have more work to do.

Behind every statistic in this area is an injury to a person.

This year (2022/23) we appeared in court and pleaded guilty to a prosecution brought by the Office

for Nuclear Regulation under Section 2 (1) of the Health and Safety at Work Act in relation to an incident from the previous financial year (2021/22).

In October 2021, one of our employees was injured falling from a scaffold ladder while carrying out repair work on an internal pipeline in the Magnox reprocessing facility.

We were fined £400,000 and ordered to pay £29,210.64 in costs as well as a surcharge of £190.

We deeply regret this incident, and we acknowledge that on this occasion we fell short in our legal duty to protect the safety of our employee.

We will continue to work hard to ensure that safety and security at Sellafield are the very best they can be.



## Site incidents and events

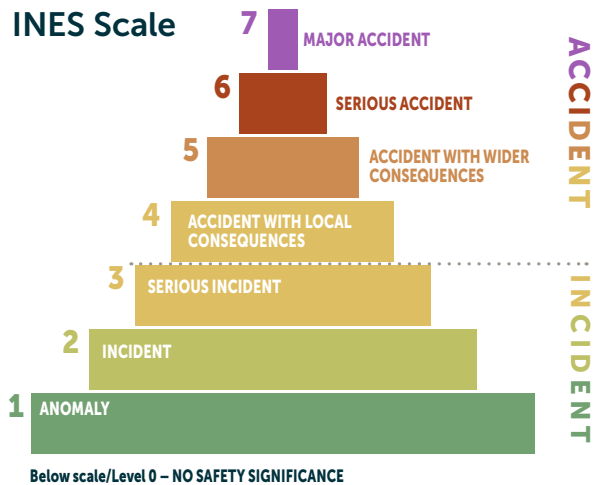
Where possible, we have provided details of the events or incidents that relate to the graphs in the following pages. We also publish details of any such events throughout the year on our website [GOV.UK/SellafieldLtd](https://www.gov.uk/SellafieldLtd)

## Making improvements

In addition to details of our performance against safety targets, you will also see some examples of where our employees are driving safety improvements, from bringing people together to share how they work safely, to taking a more sustainable and environmentally friendly approach to site transport.

# Sellafield Incident Reports

We use these metrics and others to scrutinise our performance, identify areas for improvement and put plans in place to close gaps to achieving excellence.\*



## INES Events

The International Nuclear and Radiological Event Scale (INES) is a rapid alert system used for consistent communication of events across the nuclear industry.

These are categorised between Level 1, which is an anomaly, to Level 7 which represents a major accident. See INES scale.

There were two INES events in 2022/23.

## Reportable employee dose

A Sellafield Ltd employee has received a radiation dose which takes them above the annual whole body dose limit set for workers.

The intake was identified as part of our routine dose assessment programme.

Following an investigation and further dose assessments, we have rated this event as an INES (International Nuclear and Radiological Event Scale) Level 2 (Exposure of a worker in excess of the statutory annual dose limits).

We have continued to keep the individual and our regulators informed throughout our investigations.

## Power dip

On 01 January a power loss was experienced on the Sellafield site due to a fault on an on-site grid transformer.

As the recovery from the loss was ongoing, an additional power dip was experienced as a transformer feeding one side of a substation tripped causing a loss of electrical supply to the east side of the Sellafield site and a power dip elsewhere.

Power was restored to most areas within 15 minutes. Normal power was restored to all areas within 2 hours.

A second power dip occurred on the 21 January where an on-site grid transformer went offline due to a failed cable sealing end. The transformer was isolated to make it safe.

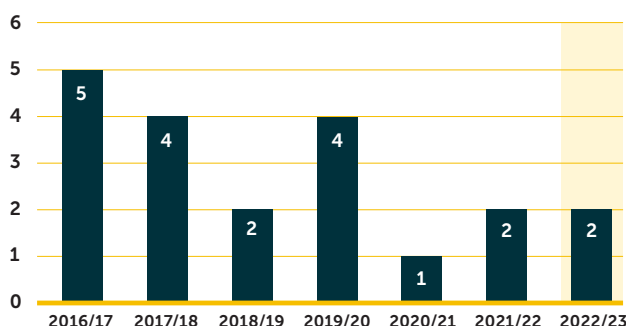
The power dip led to a loss of power in several areas, which was quickly reinstated. There was some further work to reinstate heating and hot water.

A management and electrical technical investigation is being undertaken for both incidents, which are not related to each other.

There was no risk to the public, workforce or the environment from these incidents and our regulators are being kept fully informed.

Sellafield Ltd rated the power loss on 01 January as an INES (International Nuclear and Radiological Event Scale) level 1 anomaly (minor problems with safety components with significant defence in depth remaining).

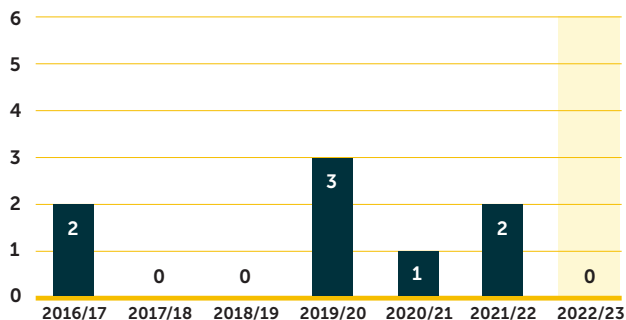
INES Events 2022/23 (Level 1 and above)



\* all metrics correct at the time of publication

# Sellafield Incident Reports

## Nuclear SIRs

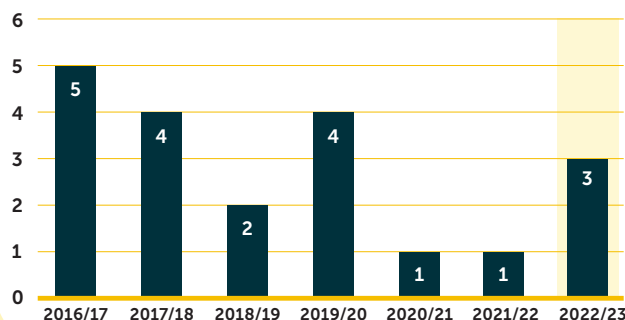


## Nuclear SIRs

This metric represents the number of Nuclear Sellafield Incident Reports (SIRs) which are nuclear events categorised as significant under our sentencing scheme.

There were none recorded during 2022/23.

## Radiological SIRs



## Radiological SIRs

This metric represents the number of Radiological Sellafield Incident Reports (SIRs) radiological events categorised as significant under our sentencing scheme.

There were three recorded during 2022/23.

## Reportable employee dose

For details, see INES Events on page 13.

## Contamination of redundant pipework

During a routine radiological survey of redundant pipework associated with the Product Finishing and Storage Plant at Sellafield, contamination was detected on a section of pipe and on the ground below.

The pipework is a historic condensate drain line that runs external to the building in a controlled section of the Sellafield site with low occupancy.

The pipework has been wrapped in a protective covering while we carry out an investigation into the cause of the contamination.

No personnel were harmed and there were no impacts on the operations of the Sellafield site.

The regulator has been informed.

## Contamination of redundant flask lid

During reassurance monitoring of a redundant transport flask lid at an off-site metals recycling facility, two small areas of contamination were detected.

The flask lid has been returned to the Sellafield site and will be processed via the appropriate waste route.

Additional monitoring has taken place and an investigation is under-way to determine the cause of the contamination.

There was no risk to the public, the workforce, or the environment.

The regulators have been informed.

# Sellafield Incident Reports

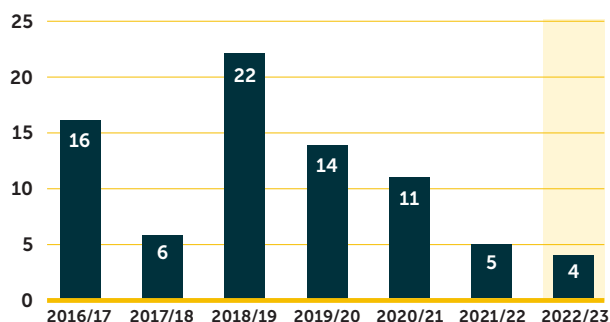
## Recordable personal (skin) contamination events

This metric provides the number of personal (skin) contamination events.

We continue to work with workforce radiological protection working groups to prevent further contamination events and are pleased to note a slight reduction in the number of these events in 2022/23.

The radiological improvement governance group is taking learning and best practice from across Sellafield, to share and deliver improved performance.

### Recordable personal (skin) contamination events



## Environmental SIRs

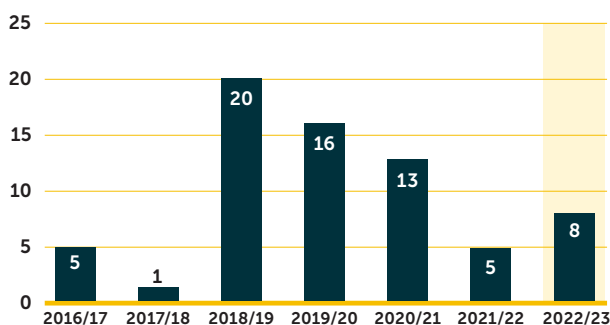
This metric represents the number of environmental Site Incident Report (SIR) events categorised as significant under our sentencing scheme and includes non-compliances of the environmental permit.

We promote a culture where environmental issues are reported openly across our business so that learning can be shared.

Raising SIRs aligns closely with notifications made to the Environment Agency and includes events where there is actual or potential for non-compliance with our environmental permits.

We have seen an increase in the number of environmental SIRs in 2022/23 compared to the previous financial year.

### Environmental SIRs



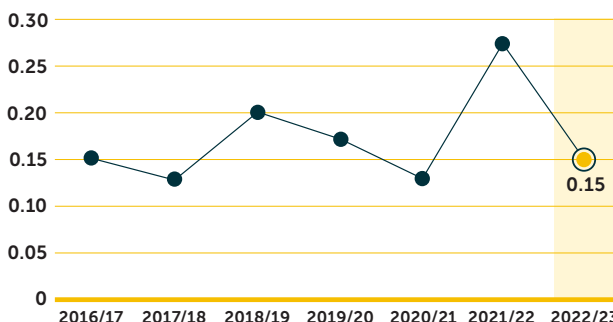
## Lost Time Accident Rate

This metric records the 12 month rolling average rate of lost time accidents (accidents resulting in more than one day from work) per 200,00 hours worked.

Most of the accidents we see are as a result of slips, trips, falls, and manual handling.

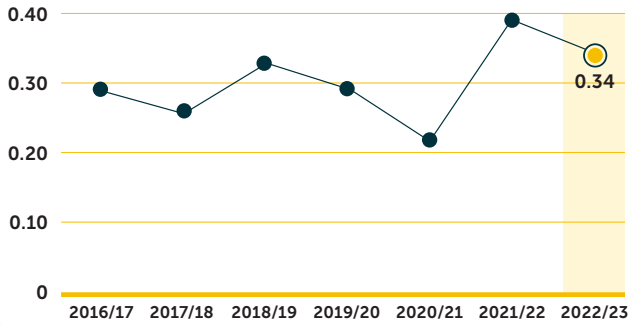
Our Lost Time Accident rate has decreased in 2022/23 to 0.15 compared to 0.27 in the previous financial year.

### Lost Time Accident Rate



# Sellafield Incident Reports

## Total Recordable Incident rate



## Total Recordable Incident rate

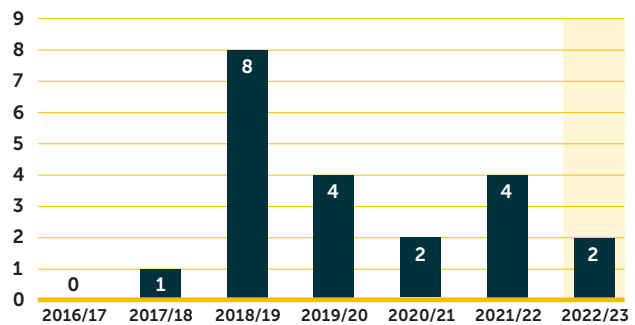
This records the 12-month rolling average rate of all total recordable incidents (accidents resulting in lost time or medical treatment) per 200,000 hours worked.

## Dangerous Occurrences

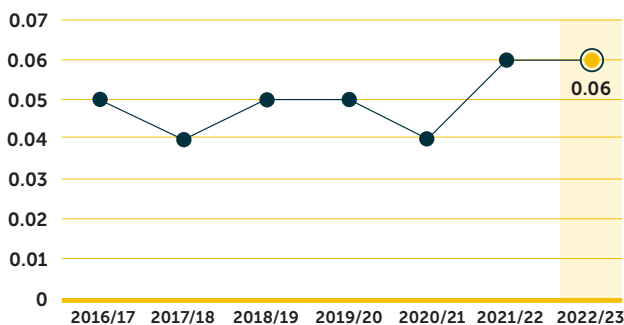
This metric records the number of RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) dangerous occurrences. These included small fires and a failure of a crane hoist.

These events are investigated to learn lessons and implement actions to prevent reoccurrences.

## Dangerous Occurrences



## RIDDOR Injury rate



## RIDDOR Injury rate

This metric records the rate of RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) injuries which result in employees being away from work for more than seven days, and specified injuries such as broken bones.

The figure shown is the 12-month rolling average rate of RIDDOR events per 100,000 hours worked.



# Environmental disclosures

Tackling climate change, while pursuing our overriding priority of safe, secure, sustainable site stewardship, is implicit within our purpose – creating a clean and safe environment for future generations – and will provide a challenge for us in the decades to come.

## Sharing our climate-related risks and opportunities

In line with new legislation, our annual financial report and accounts from the 2023/24 financial year will include disclosures on any climate-related financial information, ensuring that we consider the risks and opportunities we face as a result of climate change.

While this reporting will be mandatory from next year, we wanted to reflect our commitment to environmental protection by sharing our current thinking in this area this year.

## Our track-record of environmental protection investments

While the reporting legislation is new, our commitment to considering the risks and opportunities we face as a result of climate change is not.

For example, the Sellafield site sits on the West Cumbrian coastline. While it does suffer from extreme weather (wind, rain, snow, flooding) it is comparatively less likely to suffer from severe earthquakes, hurricanes and tsunamis.

Despite the unlikelihood of a tsunami that would impact Sellafield, following the events at Fukushima in 2011, we undertook an extensive programme to challenge and improve our resilience, for example to loss of off-site power.

As a result, we installed additional equipment local to our key facilities, such as black-start generators. We also invested in significant response equipment to help us respond to flooding, and in the unlikely event of a breach of containment from seismic activity or severe weather events.



# Environmental disclosures

## Formalising our climate-related risk management

This year we have brought together a group of subject-matter experts from across our business to take a lead in consideration of our climate resilience and overseeing the development of our climate-risks and the management of them.

This group includes our strategy, business continuity, severe accident analysis, risk management, environment, finance, supply chain and communications teams. They bring together horizon-scanning, learning from others, benchmarking, risk management, governance and reporting to ensure that we challenge ourselves to appropriately consider the range of potential future scenarios and take action to increase our preparedness.

Ellis from our strategy team is part of that group and shares his experience of being part of the group on page 21.

## Progress in 2022/23 and our governance arrangements

Our focus so far has been on the development and agreement of climate-related risks.

An overarching single climate resilience risk sits with our Executive, with additional governance provided by our Audit and Risk Assurance Committee (a sub-set of the Sellafield Ltd Board).

There is then a suite of supporting risks that are owned by the relevant area of our business so that they can be managed by those areas of the organisation that are best placed to make a difference.

In addition, working with our safety case team, we have undertaken reviews of published information of extreme high temperatures and sea level rise, to confirm that the projected extremes are unlikely to challenge

those that we have traditionally based our safety cases (and design standards) on.

A specific project is ongoing looking at impacts for our long-term storage of material in ponds; and how the specification of pond cooling requirements will be affected by extreme ambient temperatures.

In 2023/24 we will develop our climate data and projections and identify a small number of key risk indicators that we can use to understand the trends and velocity of these risks.

As part of that, we will consider both acute and chronic impacts, for example:

- Acute impacts could include emergency scenarios with severe flooding or damage
- Chronic impacts could include the number of days work lost due to high winds or hot temperatures impacting operational and project activities on the site.

## Sharing our impact on the environment

To mitigate our impact upon climate change we have developed a Carbon Management Plan that sets out our ambition to deliver the following carbon reduction by 2050:

Scope 1 and 2 reduction of **5%** ↓ in 2021/22

Scope 1 and 2 reduction of **70%** ↓ on or before 2030

Scope 1 and 2 reduction of **90%** ↓ by 2050

Scope 3 reduction of **80%** ↓ by 2050

Details of our carbon reduction are published in our annual financial report and accounts each year and are available on our website [GOV.UK/SellafieldLtd](https://www.gov.uk/SellafieldLtd)



## Understanding our climate-related risks



**i THE MISSION:**  
Help tackle climate change, while pursuing our overriding priority of safe, secure, sustainable site stewardship

**✓ 2022/23 PROJECT:**  
Create a cross-business group to focus on our climate-related risks

In 2022/23 we brought together a group of subject-matter experts from across our business to take a lead in consideration of our climate resilience and oversee the development of our climate-risks and the management of them.

**Ellis** from our strategy team was part of that group.

“What happened at the Fukushima nuclear power plant in Japan in 2011 showed the world the potential impact of environmental events on nuclear facilities.

“Given the location of our nuclear site, it is highly unlikely that we will experience a tsunami, but we do feel the impacts of extreme weather, like flooding.

“Some climate-related risks, like flooding, are easy to plan for, and the Company has invested in emergency response equipment for those scenarios.

“Others are harder because either the risk isn’t yet fully understood, or because it is unlikely to impact our

operations for decades – so you have to scenario plan for an incident that might happen at a time it the future when what we are doing on the site will be different to what we are doing today.

**“But that is exactly what responsible organisations do. They look at potential risks, stress test existing arrangements, assess what the impact could be, and then take mitigating action where appropriate.**

“Helping the business identify potential climate-related risks and opportunities so that we continue to protect our employees, local community, and the environment for as long as our mission at Sellafield takes, and seeing that commitment at all levels of the business is something that I’m really proud to have been a part of this year.”

# Climate -related risks

## **Our overarching Enterprise risk:**

Due to climate change, there is a threat of acute threats and chronic, transitional effects, which may result in delays to the site mission and increased costs for preventative and reactionary measures.

## **Our acute risks include:**

- Extreme weather
- Site flooding
- Drought
- Extreme heat creating intolerable working conditions.

## **Our transitional risks include:**

- High site energy consumption and volatile energy markets
- Security of materials and resources

## **Our climate opportunities include:**

- Investment in technologies and emerging practices
- Investment in our carbon management plan



- i THE MISSION:**  
Reduce our carbon footprint
- ✓ 2022/23 PROJECT:**  
Introduce more sustainable methods of transport

# A sustainable approach to transport

Sellafield is often compared to a small town. We even have our own internal rail network for moving materials around the site.

Our road network is also used by our thousands of employees and supply chain colleagues every day.

This year **Stephen** swapped from driving a diesel train to a hybrid, and **Izzy** helped to bring e-bikes to the Sellafield site – just two examples of how our teams are making changes to make the site more sustainable.

## Going loco for electric trains

“We use trains to move massive transport flasks around the Sellafield site, whether that is collecting them from Nuclear Transport Services at the West Coast Main Line or moving them between buildings on the site.

“The locos we have traditionally used have been diesel engines, with some of them now more than 50 years old. A combination of their age and the fact that they run solely on an engine that has a lot of moving parts is making them increasingly expensive to maintain and repair.

“The fact that they are diesel also means that they aren’t very environmentally friendly pieces of kit.

“Last year we brought in the first hybrid machines that run primarily on electricity from lead acid batteries with a backup generator.

“It generates far fewer emissions than its predecessors. We pull up inside some of the facilities in order to collect flasks, so it is good to know that we are putting fewer emissions into those buildings where people are working.

“As a driver of the new locos there have been some challenges, the controls are different for example. It’s a bit like going from driving a 50-year-old diesel car to an automatic electric one, it takes a bit of getting used to. But I love the challenge, and I’m learning something new about the loco every time I drive it.

“I’m proud to have been involved in the project, and proud that Sellafield has made such a huge investment in buying these new locos.

“The next loco coming onto the site is going to be completely electric, no backup generator, so the potential for us to make even more carbon reduction savings in the future is huge. Really exciting times.”



“Last year we brought in the first hybrid machines that run primarily on electricity from lead acid batteries with a backup generator.”

## Environment

A sustainable approach to transport (continued)

### Pedal power

"As chair of Sellafield's cycle group, the potential of introducing electric bikes on the site was of real interest to me.

"As a group we generally focus on the commuting element of cycling, but the opportunity for people to use bikes to get around the site, not just to and from it, was something I believed would have potential health and environmental benefits.

**"Our sustainability team had some funding that we could use to buy an e-bike, they just needed a team who could use it as a pilot project.**



"My day job as a radiation protection adviser takes me all around the site. Me and my fellow advisers might be in a nuclear facility providing advice on safe working with ionising radiation in the morning, then at a different building doing training in the afternoon, and back to our base office in the middle.

"So, I volunteered our team to take part in the pilot.

"People can sometimes be nervous of cycling, thinking that they aren't fit enough or that they are going to reach their destination all sweaty. The beauty of the e-bike is that it takes the strain, you can just put it into turbo mode and enjoy the ride.

"The site does have a good bus network, but to use it you do have to walk to the bus stop, wait for the right bus, and your stop might be the last one on the route. With the e-bike every journey across the site can be done in about ten minutes, and it is fun!

"There are obvious environmental benefits to using an electric bike compared to a bus, for example. But the real benefit for me has been the health benefit. People using the bikes are getting fresh air between meetings, and all the people I have seen using the bikes have had big smiles on their faces.

"I'm proud to have been part of the project. Hopefully we can get even more electric bikes on the site in the future."

**"With the e-bike every journey across the site can be done in about ten minutes, and it is fun!"**

# Steaming ahead on carbon reduction

Supporting the Government's net zero ambitions by reducing our own carbon footprint at Sellafield is an ongoing priority for the site.

**i THE MISSION:**  
Reduce our carbon footprint

**✓ 2022/23 PROJECT:**  
Change the way we provide steam to the site

Fundamentally changing the way that we provide steam to the site has delivered some massive carbon savings this year, thanks to **Peter** and the team at the Combined Heat and Power Plant.

"We need a lot of steam at Sellafield. It supports our nuclear operations and the welfare arrangements like heating and hot water for people working on the site. That steam is generated at the Combined Heat and Power Plant just off the site.

"Historically we have always made sure that we had enough steam to support the site, and then some more 'just in case'. So, if one of the gas turbines was to trip, we would have an excess of steam that we could use.

"Most of the time we didn't need the excess so it would be vented into the atmosphere. It can be a noisy process which isn't great for the people who live close to the plant, but it also represented a waste of energy. Good for resilience, but not great for the environment.

"This year we've worked hard to bring in a new operating model for steam generation, where we generate what we need and keep support boilers warm rather than fully generating.

"If you imagine that we have four kettles that we boil to produce steam for the site and the site needs the amount of steam produced by two of those kettles.

"Before this year, we would have kept all four of the kettles boiling all the time. Now we just keep the two that we need boiling all the time and keep the other two warm rather than boiling. That means that they are quick to boil if we do need them, but they aren't wasting energy when we don't need them.

"Our turbines and boilers are more complex than a domestic kettle, but that's essentially what we've done.

**"The result is a 41% reduction in energy use while maintaining current operations, and an equal reduction in the carbon emissions which has a huge impact on our environment."**



# Safety exhibition

Every year we hold a safety pause at Sellafield and in our offices, giving everyone the opportunity to stop what they are doing and focus on safety with their teams.

This year we also held a safety exhibition, thanks to a dedicated organising team, including safety support graduates Georgina and Jade.



Georgina and Jade

## Is this the kind of project you imagined you'd be doing when you joined our graduate scheme?

**Jade:** "What I've learned about the graduate scheme at Sellafield is that it doesn't just develop you professionally, it also really supports your personal development. As well as being part of the exhibition team Georgina and I were also part of the graduate fundraising committee."

**Georgina:** "We raised more than £15,000 for the Sellafield site charities of the year, Hospice at Home West Cumbria and MacMillan Cancer Support West Cumbria. We organised events every month and completing challenges like taking on seven of the biggest Wainwright fells in one day."

## What made the event a success for you?

**Jade:** "For me success was the challenges we overcame in the run up to the event. For example, we were about to print the banners and posters to promote the event when we found out that the building we had planned to use was closed due to asbestos. We all got our heads together to find an alternative and while that felt a bit stressful it was an amazing feeling when we had secured the new venue."

## Why hold a safety exhibition?

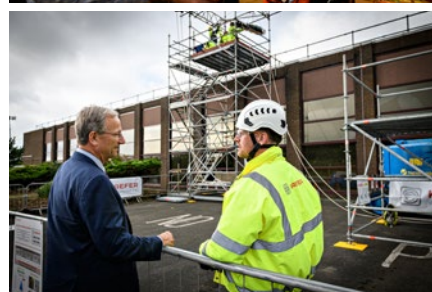
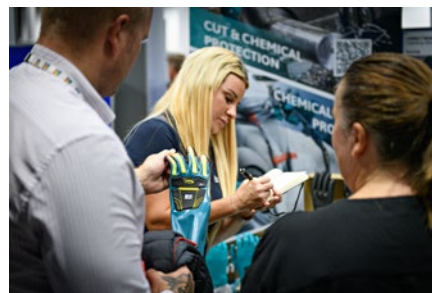
**Jade:** "The safety exhibition was organised to build on the success of this year's safety pause. The 'pause' gave people the opportunity to talk about safety and the exhibition gave them the opportunity to learn about how their peers across the business and supply chain are working safely."

## What were you each responsible for?

**Georgina:** "Everyone in the organising team had their own roles to make the event a success. My role was to look after the exhibitors, understanding what they needed for their stalls and then making sure they had everything they needed. Jade took the lead in promoting the event, producing banners and posters."

**i THE MISSION:**  
Complete our work with safety as our number one priority

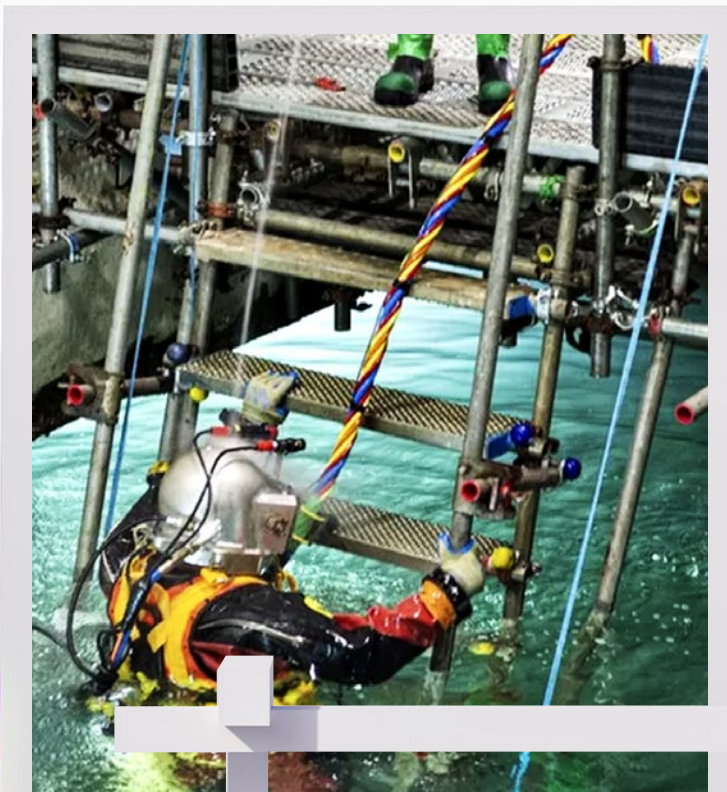
**✓ 2022/23 PROJECT:**  
Hold a safety exhibition for employees and supply chain



**Georgina:** "Feeling the buzz of more than 1,000 people from across the business and supply chain all talking to each other about how they work safely is something I'll remember for a long time."



# Progress



# Risk and hazard reduction

# MSSS\* retrievals

\*Magnox Swarf Storage Silo

Standing in the oldest part of the Sellafield site, the Magnox Swarf Storage Silo has stored nuclear waste in its water-filled chambers for the last 60 years.

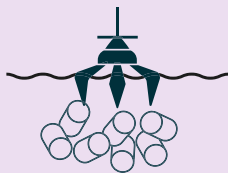
It was originally constructed as 6 silos in the 1960s and then extended 3 times.

Once a vital part of the nation's nuclear energy generation, the building stored the casings removed from used fuel rods from Magnox reactors so that the fuel inside could be reprocessed.

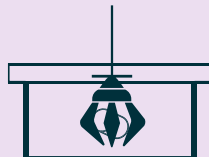
Now, due to the age of the building, the contents held inside, and the fact that it was never built with decommissioning in mind, it is one of the most hazardous nuclear facilities on the Sellafield site and in the Nuclear Decommissioning Authority's estate.

**i THE MISSION:**  
Remove the risk by emptying the waste held inside the silo

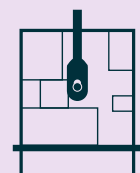
**✓ 2022/23 OBJECTIVE:**  
Start to take the waste out of the silo



**1** Silo Emptying Machine reaches into water filled compartment to grab waste



**2** Waste is placed into a skip



**3** Skip is placed inside a transport flask



**4** Flask is taken from the silo to a modern store



**5** Once empty of waste, the silo can be decommissioned and demolished

# Risk and hazard reduction

## MSSS retrievals (continued)

Our teams took two major steps forward in the clean-up of the Magnox Swarf Storage Silo in 2022/23 with the installation of the second retrievals machine and the start of retrievals.

Mathew is part of the team responsible for retrieving the waste held inside the silo's compartments.

"I drive the machine that reaches down into the waste compartments, grabs waste and puts it into a skip.

"It is an impressive machine, bigger than a double-decker bus. It sits on rails so that we can move it to the top of the different compartments. Ultimately, we'll have three of these retrieval machines working to empty the silo. This year we installed the second one.

"I've been part of the team for six years, and we've practiced with the equipment away from the silo.

"In April we made the first grab of waste. It was an amazing day, there were lots of people on the plant that day because it is something that we have been working towards and building up to for twenty years.

"It takes between 12 and 15 grabs to fill the skip. You can't see what you've picked up until the grab comes out of the water, and even then we can only see the grab on a monitor.

**"We went on to fill 19 skips in 2022/23. It's just the start and we have a lot more to do, but to have been there at the start of retrievals, to be part of the site's history, that's something that I'm really proud of."**



## Risk and hazard reduction

# Crane repair

Pile Fuel Cladding Silo

**i THE MISSION:**  
Remove the risk by emptying the waste from the silo

**✓ 2022/23 OBJECTIVE:**  
Start retrievals

A mechanical failure on a crane meant that we couldn't start to empty one of our highest hazards at Sellafield this year.

**Bret** is part of the team that has been working hard this year to retrieve the crane.

**"The equipment we'll use to take radioactive waste out of the Pile Fuel Cladding Silo works in a similar way to those toy grab machines you sometimes see at fairgrounds."**

"A crane will reach inside one of the silo compartments via the doors we installed a couple of years ago. It will then reach down inside the compartment, 'grab' some waste, and then place it inside a box so that it can be moved to modern storage buildings elsewhere on site.

"When the crane failed, we were obviously disappointed, but we quickly turned our thoughts to what had to be done to fix it and bring it back into service. We also wanted to investigate the building to make sure that no damage had been caused when the crane failed.



"Thankfully we'd built a replica crane up at Rosyth so that the operators could practice using the machine away from the silo and the site. We were able to take parts from that crane and use them to repair the one on site, saving us time and money.

"My role was to co-ordinate the work happening on the crane on site, the crane in Rosyth and the design engineering team working in Warrington.

"I am proud of the way the team pulled together and for their resilience and determination to get the job done.

"The repairs to the crane are complete, we have confirmed that no damage was caused to the building, and we expect to take the first batch of waste out of the silo this summer."



## Risk and hazard reduction

# Deep dive

Pile Fuel Storage Pond

**i THE MISSION:**  
Remove the risk by emptying the waste from the pond

**✓ 2022/23 OBJECTIVE:**  
Trial the use of divers in the pond



In addition to continuing to take radioactive waste and sludge out of the Pile Fuel Storage Pond this year, the team reached another significant milestone, the first human entry into the pond since it started operations.

It was health physics team leader **Adam** and his team's job to make sure that the divers were safe.

"The teams working to empty the fuel, sludge and other items out of the pond have done an amazing job in recent years.

"When it got to the point where it was becoming too difficult to do the work just from the side of the pond because of limited reach and visibility we introduced remote operated vehicles, but there are some tasks that even they can't do easily.

"So, after years of hard work and meticulous planning, we used underwater divers in the pond for the first time.

"Watching them work in the pond was remarkable. They could remove steelwork from the pond walls, use our equipment to suck up sludge from the pond floor, and pick up small bits of metal that were too small for the remote vehicles to grab.

"These tasks would have taken our teams weeks to complete above water. Introducing divers physically into the pond significantly reduced this time to a matter of hours. The potential for us to collectively accelerate the rate at which we can empty the pond is phenomenal and is an exciting prospect for the future.

"As a team our main focus was to monitor and maintain the radiological safety of the divers at all times. Monitoring dose levels continuously proved hugely successful in ensuring all personnel stayed within permitted levels.

**"Real time monitoring equipment meant that we could quickly see if they were in what we**

**might call a 'hot spot', a place in the pond with higher levels of radiation and move them to a different area.**

"Once out of the water, the teams conducted additional monitoring checks of the divers, suits and area of work to ensure a smooth exit from the pond, remove contamination and prepare everything for the next dive.

"I am proud of this project – it is something that I put my heart and soul into, and I can't fault my team. Together we worked hard to ensure the dive team were kept safe. There wasn't a single incident of personnel contamination, a huge success and evidence of how professional the monitoring team conducted their work"

## Risk and hazard reduction

# Making space

## First Generation Magnox Storage Pond

Taking radioactive waste and sludge out of the First Generation Magnox Storage Pond continued in 2022/23. We also had another essential task to complete, making space on the pond floor.

Former apprentice **Imogen** is one of our remote operated vehicle pilots.

"Not everything can be taken out of the pond at once, so it is useful to have clear space in the pond that we can use to place other items before they are removed.

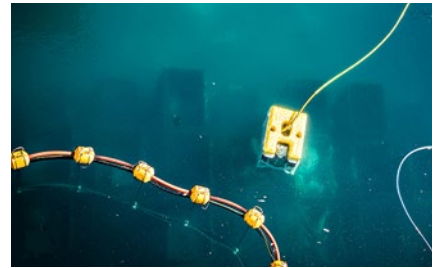
"Remote operated vehicles – mini submarines if you like – give us access to the pond. We first used them to look around the pond, now we are fitting them with tools so that they can do work in the pond.

"The tool we have used to clear the debris at the bottom of the pond is essentially a modified garden rake that we've adapted so that we can use it to push and pull the debris. As operators we were really involved in developing the tool because, at the end of the day, we are the ones who need to be able to use it.

**"We needed something flexible but durable, something that would be shock absorbent for when it hit the floor of the pond, and short enough to not sway in the water and disturb the debris."**

**i THE MISSION:**  
Remove the risk by emptying the waste from the pond

**✓ 2022/23 TASK:**  
Make space on the pond floor



"I feel lucky to have had the opportunity to have trained as a remote operated vehicle pilot, it isn't something I could have guessed would happen when I joined the Company as an apprentice nuclear operator in 2020, but really anyone could be trained to do it.

"What is more important is pond knowledge.

"Some days you'll put the vehicle into the pond and water conditions will mean that you have very little visibility. So really knowing the pond and engraving it in your mind so that you know exactly where the vehicle is at all times is vital. That means researching pond maps and checking to see what has changed every day.

"I am proud that this year I have qualified to fly all three of the types of remote operated vehicle we have in the pond, and that the work I have done to help clear the pond floor will help the team to ultimately emptying the pond."



# Reducing high level waste stocks

**i THE MISSION:**  
Reduce our stocks of liquid highly active nuclear waste

**✓ 2022/23 OBJECTIVE:**  
Use an existing evaporator to reduce the volume of waste containing solids



“We have done a lot of work to modify the evaporator, including to the temperature instrumentation, so that we could take liquor from these storage tanks, reduce its volume, and then put the concentrate back into the tank.

“The less liquor that we need to put through the vitrification plant, the less pressure we are putting on that plant.

“It is also an efficient and cost-saving way of reducing the volume of this waste that we have on site.

**“We were able to reduce 75m<sup>3</sup> liquor to 20m<sup>3</sup> in one week, a 55m<sup>3</sup> reduction in liquor. Achieving the same reduction in liquor via the vitrification plant would have taken two years at a cost of around £40 million.**

“As shift team leader my role was to support my operations team through the project, ensuring safety at every stage. It is an exciting time at the plant and there is a sense of pride in the team that we have demonstrated that we can reduce the volume of this hazardous material without having to rely on any other facility being available.”

Highly level waste is a liquid by-product of reprocessing used nuclear fuel. At Sellafield that waste came from the Thorp and Magnox reprocessing plants until they stopped their operations. There is also a stock of the waste held in storage tanks on the site.

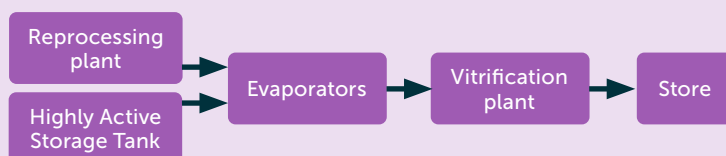
The waste held in some of the storage tanks contains some solids which makes it more of a challenge to manage. For **Stacey** and the rest of her team, the challenge this year was to use the evaporator they had to reduce the volume of our highest hazard waste, delivering massive savings in the process.

“It is probably useful to think of our evaporators like huge industrial scale kettles that can boil the waste under reduced pressure to reduce the volume of the liquid. That concentrated liquor is then sent on to our vitrification plant where it is mixed with molten glass to turn it into a solid, stable form.

“This was a straightforward process when the liquor came to us directly from the reprocessing plants. Once reprocessing work stopped, we could turn our full attention to the liquor that is held in the storage tanks which has, in some cases, been there for a long time and so contains some solids that are more challenging.

“If the solids settled in the evaporator, they could cause hot spots which would raise the temperature of the evaporator and ultimately shut it down.

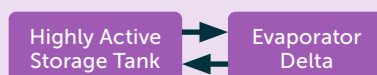
### How we traditionally handle high level waste:



To achieve 50m<sup>3</sup> reduction:

**2 years**

### How the team reduced the volume of waste:



**1 week**





## Site remediation

# Demolishing redundant buildings

**i THE MISSION:**  
Make space on the Sellafield site for new projects

**✓ 2022/23 CHALLENGE:**  
Demolish redundant buildings at Calder Hall



We have more than 1,000 buildings on the Sellafield site, and more than 200 of those are classed as 'nuclear' buildings because they work with, manage, or store radioactive materials.

These buildings, along with a complex road and rail network, means that the nuclear site is congested.

We also need to build new facilities. In fact, we have one of the biggest portfolios of major projects in the country.

With space at a premium, the work of **Louise** and her colleagues in demolishing redundant buildings to make space for new ones is incredibly important.

"My role as sub-project manager on the Calder land clearance project this year has been to help demolish some of the historical buildings at Calder Hall.

"When it opened, Calder Hall was the first commercial-sized nuclear power station in the world. It stopped generating electricity in 2003, and we've been working to decommission and demolish the station ever since.

"The most visual change was probably the controlled explosive demolition of the four iconic cooling towers in 2009.

"We're already building new projects where two of the four cooling towers used to stand, so as a team we know that we can help the site by demolishing more of the station and creating more valuable space.

"The first thing we did was complete what we call a 'soft strip' where we clear out the inside of the buildings. With older buildings this can often include safely dealing with and disposing of asbestos.

"Demolition isn't always straightforward. For example, this year we found evidence of bats in one of the buildings that we want to demolish.

"These things can cause delays which can be frustrating, but the challenges are also what makes the job so varied. And when we overcome those challenges and see buildings coming down, and knowing that we're helping Sellafield by creating space for the new buildings we need to clean-up the site, it makes me really proud."



# Preparing land for construction

When old buildings at Sellafield are demolished, the land is used to build the new facilities we need to deliver our purpose. Those buildings include storage facilities for nuclear materials and wastes.

Before new construction can start, however, the land needs to be properly prepared for use. That task falls to programme manager **Stephen** and the rest of the team in the land and infrastructure programme.

“Some of the biggest risks to the schedule and costs of new construction projects are related to what is under the ground.

“That’s the case with any construction project, not just at Sellafield. You could be building a new supermarket and you’d still face potential delays

because of what you find when you start digging the foundations. Finding and then having to remove things like old utilities has an impact on your project schedule.

“At Sellafield we obviously have additional risks that you wouldn’t have if you were building a supermarket. Things like radioactive contamination.

“It is our job as a land and infrastructure programme team to prepare the land before construction starts, rather than waiting to find problems at the point of construction.

**“As a team we also take a long-term strategic view of land and construction and find ways to reduce costs.**

“For example, when we dig a foundation for a new building we inevitably end up with a lot of surplus material from excavation, called spoil. Historically we have paid for that spoil to be taken away and disposed of. Then, when we need to backfill land elsewhere on site for another project, we would need to buy spoil.

“By taking a longer-term view of construction we can map when we will be creating spoil, and when we will need it, reducing the costs of disposal and of buying spoil.

“The fact that the Company has created the land and infrastructure programme and that it recognises land as an asset is a personal highlight for me. It is the culmination of years of work.”

**i THE MISSION:**  
Build the new nuclear facilities we need

**✓ 2022/23 CHALLENGE:**  
Remove future project delays by preparing land ready for construction





# Magnox: the end of reprocessing

**i THE MISSION:**  
Complete reprocessing

**✓ 2022/23 CHALLENGE:**  
Bring Magnox reprocessing operations to an end

## What was Magnox reprocessing?

The Magnox Reprocessing Plant started operations in 1964 and played a crucial role in UK energy generation. It received and reprocessed nearly 55,000 tonnes of spent (or used) Magnox nuclear fuel from power stations across the country, and Italy and Japan.

That allowed the UK's 11 Magnox power stations to keep low carbon electricity flowing to homes and businesses in England, Scotland, and Wales.

## How did it work?

Before it could be reprocessed, the used Magnox fuel was stored for at least 180 days in ponds to allow short lived fission products to decay.

Once brought to Sellafield we stored it in a pond to allow it to cool further and then removed the outer cladding from the fuel rods. All of that happened in the Fuel Handling Plant.

The fuel was then transferred to the Magnox Reprocessing Plant where it was dissolved in nitric acid. That solution was then subject to a series of solvent extraction processes that separated it into three component parts, uranium, plutonium and waste.



## Spent fuel management

Magnox (continued)

## Maintaining the reprocessing plant



**In June 2022, our teams in the Magnox Reprocessing Plant safely reprocessed the final batch of spent fuel.**

**The building had been operating for 59 years, and we need to be able to operate it for the next few years in order to complete the first phase of decommissioning, known as the post operational clean out.**

Maintaining the nuclear facility so that it can keep operating safely falls to **Chris** and the engineering maintenance teams.

“I’ve been at Sellafield for 40 years and have worked in Magnox Reprocessing for the last 23 years, so feeding that last fuel rod into the plant and completing reprocessing was a personal highlight for me this year.

“There is a real sense of pride in everyone on the plant.

“While the end of reprocessing was a significant change for the plant, in some ways my job is still the same. It’s pretty much business as usual.

“We need to keep the plant working so that we can flush out as much of the radioactive materials as possible from the pipework, tanks and cells. It’s the first step in ultimately decommissioning and then demolishing the facility.

“At any time, day or night, the phone will go and there will be something on the plant that needs to be fixed. Our maintenance team includes electricians, technicians and fitters, so we can deal with pretty much anything thrown at us.

“One of the biggest challenges we do have is finding the spare parts that we need. The Magnox Reprocessing Plant is old, so we sometimes need to work with our supply chain partners to find modern alternatives to parts that are no longer manufactured.

**“It really is a team effort.”**





## Major project delivery

# Improving our analytical services

The facilities that we use for analytical services at Sellafield are ageing and need to be replaced.

The task of delivering our Replacement Analytical Services project to time and cost falls to our Programme and Project Partners, a delivery model that brings Sellafield Ltd together with four private sector partners – KBR inc, Jacobs, Morgan Sindall, and Altrad.

Improving stakeholder confidence in our collective ability to deliver the project has been a highlight this

year for governance and assurance manager, **Jeny**.

“Every day we use analytical services to assess and categorise the chemical and/or radiological properties of hazardous material across the Sellafield site.

“Once correctly categorised, the material can be safely and efficiently prepared for long-term disposal and storage in a future geological disposal facility.

“Without analytical services we would be unable to deliver our statutory obligations, or safely complete high hazard risk reduction operations and programmes anywhere on site.

- i THE MISSION:**  
Ensure that Sellafield can analyse radioactive samples
- ✓ 2022/23 CHALLENGE:**  
Improve stakeholder confidence in our ability to deliver the Replacement Analytics project

**“The Replacement Analytical Services project is designed to ensure that we have the capacity to analyse all of the samples we need to in order to deliver our work.**

“The project will see us refurbishing the National Nuclear Laboratory central lab on the Sellafield site, replacing the current laboratories, plants and services. It will also see us adding a new build extension on the back of the current building.

“Because of the project’s cost, schedule and complexity it is on the Government Major Project Portfolio list and so is subject to an annual review by the Infrastructure Projects Authority. In 2021 that review gave the project a red rating, meaning that our stakeholders didn’t have confidence in our ability to deliver the project.

“As governance and assurance manager it was part of my role to work with the team to improve that confidence. In the last twelve months we’ve done a lot of work on the project’s schedule and costs, and in the last review the Infrastructure Projects Authority awarded an improved project rating of amber.

“We still have more work to do, but as a team we’re proud that we are seeing an improvement in stakeholder confidence.

“The project is the detailed design phase of the major project lifecycle, but we are also doing early construction enabling works within and around the building, including the installation of the construction welfare village. When this is operational it means that the construction team will have a primary base on site to ramp up for the main construction works.”



## Major project delivery

# New nuclear building gets to work

- i THE MISSION:**  
Empty waste out of one of our highest hazard facilities, the Magnox Swarf Storage Silo
- ✓ 2022/23 CHALLENGE:**  
Bring the Silo Maintenance Facility into active operations



**“I’ve heard the Silos Maintenance Facility described as a world-class facility, but for me it isn’t the building that is world class, it’s the people.”**

**Retrieving nuclear waste from the Magnox Swarf Storage Silo so that it can be moved to modern storage facilities relies on the consistent availability of retrievals equipment and transport packages.**

One of our newest buildings, the Silos Maintenance Facility has been designed to maintain the retrievals equipment. This year, thanks to **Joe** and his teams, the plant started work.

“This year we started what we call active operations in the Silos Maintenance Facility, the culmination of years of planning, construction and fitting works, commissioning and getting all of the necessary permissions to start work.

“People might think that it is as simple as ‘the facility is finished, turn it on’, but given the nature of our work at Sellafield it is more complicated than that.

“We’ve worked with all of the other operational buildings that we will rely on at Sellafield to get their approvals. For example, we will generate what we call effluent waste in our facility, so the existing effluent plant teams had to be confident that they can manage the additional waste that we’ll generate.

“You often hear about individual teams working as one team but, for me, the one team approach stretches beyond immediate teams and buildings. People come together to get the job done at Sellafield.

“The culture that we’ve created in the facility is something I’m really proud of this year, as is our safety record. In

April 2023 we passed 12 years without having a lost time accident, that is an accident that resulted in one of the team being off work for more than five working days.

“I’ve heard the Silos Maintenance Facility described as a world-class facility, but for me it isn’t the building that is world class, it’s the people.

“Our job now is to make sure that the Magnox Swarf Storage Silo teams have the equipment they need, when they need it, so that they can empty the silo and remove the environmental risk.”

p26

**For more on our work to empty the Magnox Swarf Storage Silo, see page 26**



# Vessels bring new facility closer to operations



**i THE MISSION:**  
 Minimise our impact on the environment by safely managing the liquid effluents that we create through our nuclear operations

**✓ 2022/23 CHALLENGE:**  
 Make progress in the construction of the SIXEP (Site Ion Exchange Effluent Plant) Continuity Plant

Designing, manufacturing, testing and installing 59 engineered vessels is just part of our task to construct the SIXEP Continuity Plant at Sellafield.

We aren't facing this challenge alone. Colleagues from our supply chain partners are helping us at every step of the way. This project is one of the major projects being delivered under our Programme and Project Partners model which brings together four private businesses with Sellafield Ltd.

It is through that model that **Steph** from Jacobs became the lead vessel engineer for the project.

"The original SIXEP plant at Sellafield – the Site Ion Exchange Effluent Plant – is often described as the kidneys of the Sellafield site. It has been in operation since 1985 and is used to remove radioactivity from various site effluent streams before they are discharged to the sea.

"It is currently the only building of its kind at Sellafield and so we need an additional facility that can help with this important environmental work.

Exterior

Cutaway

# Major project delivery

**“The new building needs 59 vessels in total, including water tanks, effluent storage tanks, and vessels that will be used to remove the radionuclides from the effluent.”**

“As lead vessel engineer I work with a small team of engineers on the design of the vessels and work with the suppliers who are actually building them for us.

“This year we had an issue with the construction of two of the vessels, and some feedback from the operators who will ultimately run the plant that led us to redesign those vessels.

“That sounds like a relatively simple process but it meant working with the construction team, the civils team, the

fabricators, and the pressure systems team, to name just a few. Every single team involved had to be in full agreement on the new design.

“It wasn’t a quick process but it made it all the more rewarding when the vessels were delivered to the site and successfully installed in the plant.”



# 4D planning brings project to life

“Everyone brings their own ways of working so there is always an opportunity to learn and improve.”



- i THE MISSION:**  
Provide safe and secure stewardship of the country's stockpile of plutonium
- ✓ 2022/23 CHALLENGE:**  
Make progress in the construction of a retreatment plant

We deliver a national service by providing safe and secure storage for the country's stockpile of special nuclear materials, including plutonium.

Due to the radioactive nature of the material, plutonium handling and storage requires specialised facilities.

When complete, our new Sellafield Product and Residue Store Retreatment Plant will repackage and,

where appropriate retreat, the material into containers suitable for storage for at least 100 years.

Bringing in new ways of working to ensure successful delivery of our major projects is one of the benefits of our Programme and Project Partners model. The model brings together four private sector businesses with Sellafield Ltd to deliver major projects at Sellafield.

One such benefit this year was the introduction of 4D planning, thanks to technical co-ordinator, **Olivia**.

## Major project delivery

“As part of the line-of-sight team, I help to support the planning and co-ordination of work on the Sellafield Product and Residue Store Retreatment Plant construction site.

“We meet on a daily basis to manage the day-to-day running of the construction site, but we also meet weekly to plan work for the next 12 weeks.

“Traditionally that planning has been done using paper plans and schedules. This year we introduced a Building Information Modelling software that allows us to show 3D models and 4D animations of sequences of planned work.

**“Seeing the information in this way makes it much easier to spot potential issues and risks but also opportunities to alter the order of planned work.”**

“We can also use it on a day-to-day basis to help plan work on the site. For example, there are four large cranes working on the construction of the plant. We can use the software to show the exclusion zones around those cranes so that people can really easily see where it is safe to work, and where it isn't.

“One of the benefits of the Programme and Project Partner model is the experience we're getting from the many contracting companies that are now involved on our project. Everyone brings their own ways of working so there is always an opportunity to learn and improve.

“In terms of my own development, completing my 4D planning accreditation this year has been a personal highlight for me, especially seeing the difference it is making to the project.”



# Crane refurbishment brings operations within reach

**i THE MISSION:**  
Empty waste out of our highest hazard facilities

**✓ 2022/23 CHALLENGE:**  
Bring at 60te crane into service

Helping to refurbish a 60te crane at Sellafield was just one highlight for junior quality engineer and Balfour Beatty employee, **Rachel** this year.

"I work on the Sellafield site, on the Box Encapsulation Plant.

"When we've finished and the plant is ready, it will take waste from the legacy ponds and silos at Sellafield, and package that waste into 3m<sup>3</sup> boxes ready for storage.

"Being part of the project means a lot to me. I live locally to the site and I know that one day soon I'll be driving past the site and be able to point to



**"I live locally to the site and I know that one day soon I'll be driving past the site and be able to point to the building and say 'I helped to build that'."**

the building and say 'I helped to build that'. Its job is to help keep people, the community and environment safe – I'm proud to be part of that.

"Getting the crane working this year has been a highlight for me. It had been in storage for 30 years, so we've refurbished it and it is now fully operational.

"Away from the day job, another highlight for me has been the opportunity to use my training as ...a mental health first aider.

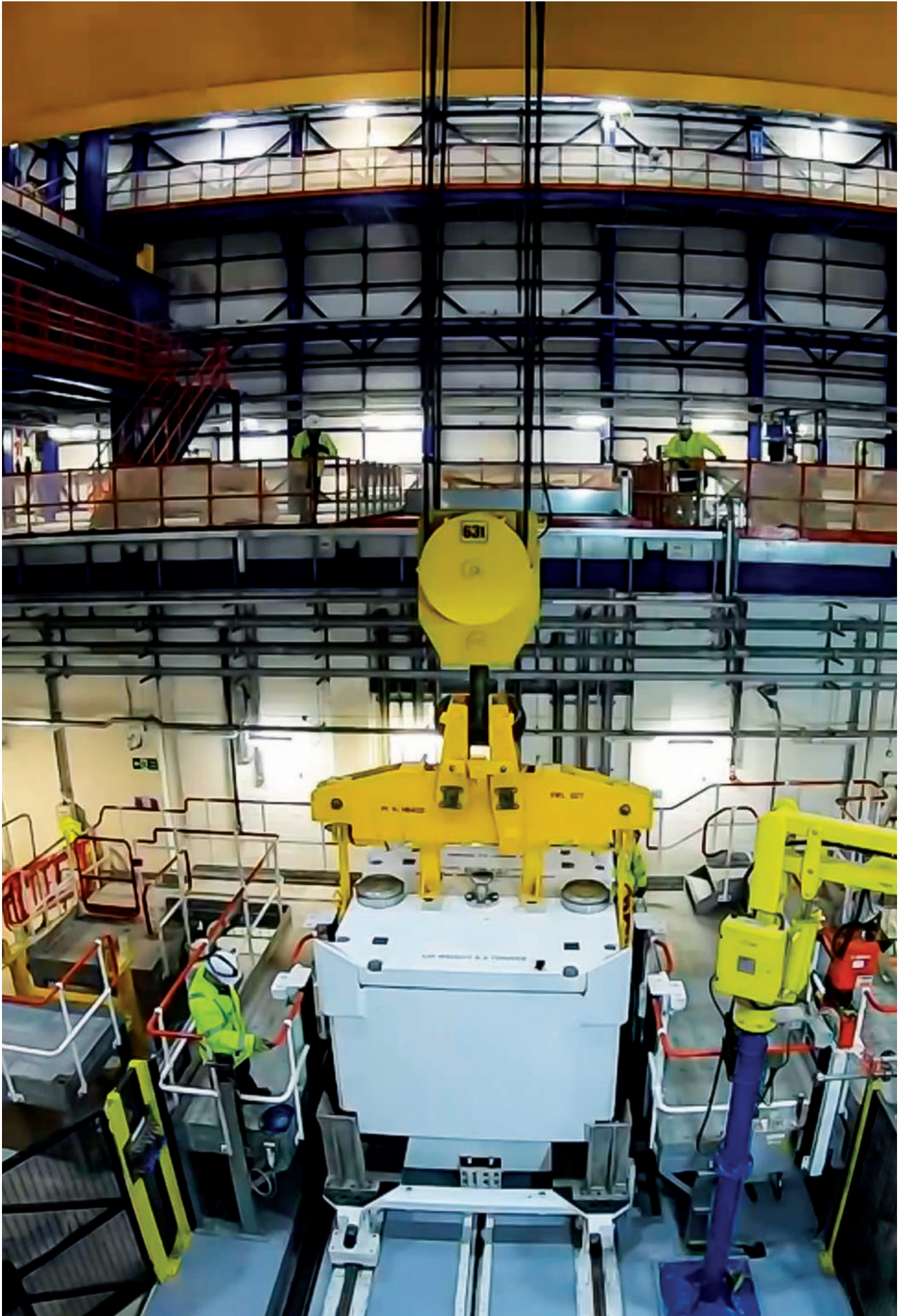
I suffered myself with mental health, so I think that when I speak with people they know that I understand where they are coming from.

"Knowing that a conversation can help someone who might have just gone home, locked the door and not wanted to come out again, is something that I am proud of.

"I'm grateful to Balfour Beatty for supporting me in my mental health role and also for supporting my career and development. Working on the Sellafield site is something that I've always wanted to do, and you don't have to work for Sellafield Ltd to do that. You can work in the supply chain and make a real difference.

"You also don't have to be male or an engineer! I love going into schools and talking with young girls and showing them that you don't need to be an engineer to work in the nuclear industry."





## Active demonstrators

# Spot the dog

- i THE MISSION:**  
Complete our work while protecting our employees, community and the environment
- ✓ 2022/23 CHALLENGE:**  
Develop technology that can be used in our highest hazard areas

"Our active demonstrator programme is where we take a technique or piece of technology, either in research and development or off-the-shelf, and prove it can fit our needs at Sellafield, working towards cheaper, safer and faster solutions to nuclear decommissioning."



Cleaning-up our legacy facilities – some of which are as old as the UK's nuclear industry itself – has historically meant that our employees have to physically enter areas of high radiation.

This work is heavily regulated with strict limits on the radiation dose each employee can reach – something that we strive to stay well under – and is done with appropriate personal protective equipment.

Through our active demonstrator programme, we are working to develop technologies that can be used in these highly radioactive areas in place of humans, and that can be used in areas so contaminated the people could never enter them.

Perhaps the most visible example this year has been the use of Spot the Dog, a project that has been developed by our graduates, remote operations team, and degree apprentices like **Jay**.

"Our active demonstrator programme is where we take a technique or piece of technology, either in research and development or off-the-shelf, and prove it can fit our needs at Sellafield, working towards cheaper, safer and faster solutions to nuclear decommissioning.

## Active demonstrators

Spot the dog (continued)

**“Spot has been through four demonstrations, enabling the robot to be used in anger for work on the Sellafield site. The demonstrations were worked on by a university placement student before me, but I was proud to take up the baton this year.”**

“Those demonstrations progressively tested the robot’s functionality. When we first brought it into Calder Hall it was just a chance to see what it could do and how it worked. We then tested it in radiological areas. The success of these demonstrations meant that the robot could start to be used in real work environments on the site.

“In the demonstrations, we fitted the robot with a contamination protection suit. Because if we can fit the right suit to the robot, it means that we can retrieve it from the active area once the work has been completed so that it can be used again elsewhere.

“The original suit was successful in preventing contamination but there were flexibility issues with the materials around the robot’s joints and it affected its depth perception.

“My role is to work with the supply chain to develop the right contamination protection suit, something I couldn’t have guessed I would get to do at this stage of my career.

“I am proud that as I go into this year of my training, I am trusted to lead projects, and to know that the projects we’re working on can help protect colleagues and keep them from harm.”





# Cutting waste down to size

We are retrieving nuclear waste skips and radioactive sludge from our legacy storage ponds at Sellafield. But there are other items that also need to be retrieved from the pond, such as redundant equipment.

Some of these items are very large and therefore don't fit into our standard waste storage containers and boxes.

Our supply chain colleagues – like assistant site engineer, **Joe** from AtkinsRéalis – are helping us by taking 'off-the-shelf' technology and creating nuclear safe solutions.

"What we've created is a unit inside an existing Sellafield building that we can use to cut up larger items of waste from the ponds.

"The unit is roughly the same size as a car wash. We take bulky waste items and use a diamond wire cutter to cut it into smaller pieces.

"When we know a piece of waste is coming to us, me and the team develop a 'cutting plan' which sets out how we'll approach the waste, where we'll cut, how many cuts we'll make, etc.

"Then when the item is retrieved we do another survey and change our plans if we need to.

"Reducing the physical size of the waste makes it easier to manage and store.

"We can also relieve pressure on existing waste storage capacity on the site by using the equipment to cut away 'hot spot' portions – that is any part of the equipment that has higher levels of radiation. Those pieces can be further segregated and sorted, rather than the whole thing needing to be stored as intermediate level waste.

**i THE MISSION:**  
Empty our high hazard legacy storage ponds

**✓ 2022/23 CHALLENGE:**  
Develop technology that can be used to help us efficiently store items retrieved from the pond



**"Getting that first piece of waste through, and showing that the unit could do what it was designed to, helping retrievals work and keeping operators away from the hazard by using robotic equipment, was brilliant."**



# Skip size reduction

**i THE MISSION:**  
Safely, securely, and efficiently store nuclear waste

**✓ 2022/23 CHALLENGE:**  
Develop technology to reduce the volume of intermediate level waste skips



The storage space we have on the Sellafield site for intermediate level waste is limited and expensive.

**Thankfully Daniel and his team, as part of our active demonstrator programme, have developed a skip size reduction facility that builds on the premise that made IKEA a global phenomenon: rather than paying to store air, it's cheaper to 'flat pack'.**

"We needed to find a way to efficiently store the skips that are being taken out of one of our high hazard facilities, the First Generation Magnox Storage Pond.

"Getting empty skips out of the pond is a business priority because it frees up the space to speed up further pond clean-up work, including sludge removal on the pond floor. There are over 1,200 skips in total.

"In the skip size reduction facility, we're using technology that is used by other industries but that has never before been used on a nuclear site.

"We receive the skips inside a container, we take the skip out of the container in a bag so that any contamination is contained. A crane then picks up the skip and puts it inside the laser cutting module where robots cut the skip into five pieces.

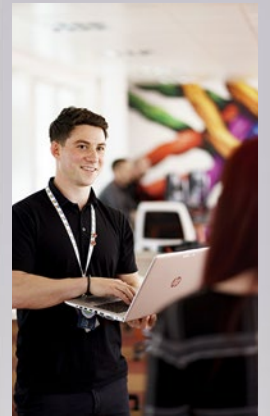
"Doing this means that we can store six skips inside each container, rather than just two. Those skips are then sent to a store on site where we can safely look after them until they're ultimately transferred to a Geological Disposal Facility.

"We work with Atkins as our principal contractor. We've also worked with a number of small to medium sized enterprises like Taylor Kightley Engineering and Cyan Tec to take this technology and adapt it for our use at Sellafield. Now we're working with them to be trained up so that if there are ever any faults on the robot that need manual intervention, me and the other operators can fix it ourselves.

"Having that opportunity to work with external stakeholders and receive development and training like this is one of the highlights of the job."

# People, skills and partners

Our work is only possible thanks to the skills and experience of our employees and supply chain partners. We remain committed to making Sellafield Ltd the organisation that we want it to be, and to delivering value to the communities in which we operate.



# Employment by numbers

No of  
Employees:

**10,121**  
staff

**167**  
contract  
supplied  
workers

**582**  
apprentices  
of which  
**195**  
joined in **2022/23**

**332**  
agency  
supplied  
workers

**148**  
graduates  
of which  
**87**  
joined in **2022/23**

**20**  
different  
apprentice  
pathways

**224**  
employees  
completing  
further  
education

**41**  
students

# Employee networks

## REACH network

This year one of our employee networks changed their name to better capture the diversity and variety of the numerous communities that they support, as **Naisha** explains.

“Race Ethnicity and Cultural Heritage – or REACH – is our new acronym for BAME (Black, Asian and Minority Ethnic). The attitude of unity, respect, and recognition is what we hope to develop as we begin a fresh commitment to inclusivity and understanding is embodied in our new name.

“Language plays a critical part in our drive for a diverse and fair society because it molds our views, impacts our attitudes, and has the power to either construct or tear down barriers.

“Numerous people from various racial and ethnic backgrounds are referred to being part of BAME. Over time we have realised that it has become

clear that this phrase falls short of adequately capturing the diversity and variety of the numerous communities it attempts to represent.

“Our dedication to recognising and celebrating the distinctive identities, histories, and achievements of people from many racial and ethnic backgrounds is reflected in REACH.

“The implementation of REACH has a significant chance of improving Sellafield Ltd.’s organisational procedures. By conforming to inclusive language and vocabulary, we demonstrate our dedication to developing a workplace environment that values diversity and promotes equal opportunity.”

**i THE MISSION:**  
Make Sellafield Ltd the organisation that we want it to be, where everyone can bring their whole selves to work

**✓ 2022/23 CHALLENGE:**  
Support the employee networks as they drive change

### We have 18 employee networks:

- Armed Forces Network
- Chronic Illness Peer Support Network
- Deaf, Hearing Loss and Tinnitus Network
- Domestic Abuse Contacts
- Dyslexia Network/Assistive Technology
- Early Careers Mental Health Support (ECMHS) Network
- Enduring Mental Health Conditions
- Family Network
- Gender Balance Network
- Mental Health First Aiders (MHFAs) Network
- Nuclear Autism Support Network
- oneLGBTQ+ Network
- REACH Network
- Sellafield MenoHub
- SL ADDers (ADHD) Network
- STAMMA Nuclear
- Stronger Together Cancer Support Group
- Workplace Chaplains



## Supporting colleagues with autism

- i THE MISSION:**  
Make Sellafield Ltd the organisation that we want it to be, where everyone can bring their whole selves to work
- ✓ 2022/23 CHALLENGE:**  
Support the employee networks as they drive change



**Katy**, one of three co-chairs of the nuclear autism network at Sellafield, is using her own experiences to help her colleagues.

"I was diagnosed with autism two years ago. During the diagnostic process I connected with the nuclear autism network, and for the last twelve months have been honoured to act as co-chair.

"We support employees who have an autism diagnosis or who have children or dependants with an autism diagnosis.

**"Part of my role is to act as a mentor, signposting individuals to the support available through the Employee Assistance Programme, our diversity and inclusion team, and our occupational health team.**

"We often liaise with employees who are creating reasonable adjustment passports with the help of their line manager to support them in work, supporting the diversity and inclusion team. The passports travel with you throughout your career at Sellafield and sets out the support or arrangements that you need, such

as adjusted working times or actions to reduce noise impact – basically anything that can support the individual at work.

"The only limit we have in helping people is time. The network role is voluntary and over and above our day jobs. If there was more time to help and to raise awareness, that would be great.

"My role allows me to help other people but being part of the network has also helped myself. It has helped me to understand my own behaviours and emotions and to see that other people struggle in the same way that I do.

"It has given me the confidence to be more open about my own autism diagnosis and being a neurodiverse individual. I am proud that I have been able to overcome my own mental health issues and that I can use my experience to help others."

# Supply chain

Our mission requires us to develop and deploy a broad spectrum of skills and capabilities.

As a business we face a choice of maintaining or developing those in-house (make) or procuring those from the market (buy). The choice is rarely binary, and the optimum solution often resides somewhere between the two.

By engaging with a diverse supply chain, we can create an environment in which we are able to integrate our own internal experience, capabilities and know-how with the expertise, capacity, and capability of the supply chain, developing fit for purpose, innovative solutions whilst demonstrating value for money to the UK taxpayer.

Furthermore, our mission affords us the opportunity to develop an innovative, diverse, and robust supply chain at all levels, whilst also leveraging our expenditure to create resilient economies and thriving communities closest to our sites.

We currently spend more than £1 billion a year with our supply chain and this is forecast to continue to do so for the forthcoming years. In representing over half of our annual site funding limit it

is apparent that the supply chain is integral to us delivering our purpose of creating a clean and safe environment for future generations.

We must work closely with our supply chain to achieve our goals whilst helping our supply chain and the wider economy to prosper.

We are delighted to recognise the work of our supply chain partners and their employees within the review.

In 2022/23

**£1.311bn**  
supply chain spend

**30**  
tenders  
each worth  
>£100,000  
awarded

In 2022/23

**36.5%**  
(£478m)

of that was spent  
with SMEs

**£124m**  
direct SME spend

**£354m**  
indirect SME spend



# William King

In 2019 we created the Programme and Project Partners model for delivering major projects at Sellafield. The industry-leading model brings together four private sector businesses (Morgan Sindall Infrastructure, Kellogg Brown and Root (KBR), Jacobs, and Doosan Babcock Ltd) with Sellafield Ltd acting as the fifth partner.

Between them, the partners have already awarded more than £3 billion worth of contracts to other supply chain companies to help deliver our major projects.

They are working with around 200 suppliers across the UK, with 40% based in the north-west region. Almost 70% of the suppliers are classed as Small to Medium Sized Enterprises (SMEs), including **William King** who won a £2.6 million contract in 2022/23.

"We're an SME but I prefer to refer to us as a family-run business. We started as a domestic construction business, building extensions then executive homes and big housing developments.

**i THE MISSION:**  
To create value for our local communities through the delivery of our purpose

**✓ 2022/23 CHALLENGE:**  
Find the supply chain partners we need to deliver the SIXEP Continuity Plant

"Our first contract at Sellafield was working with Mitie, helping them to deliver their facilities management contract.

**"Winning our own contracts with the site was an absolutely massive deal for us. These are prestigious contracts of national significance.**

"Being awarded the contract to deliver masonry and the internal fire door fit-out to the SIXEP Continuity Plant project was definitely a highlight for me last year.

"It is our biggest project at Sellafield to date. The contract means that we can continue to do what we are passionate about, that is being a business that employs local people and one that helps inspire kids into the construction industry.

"We've always offered apprenticeships. This contract means that not only can we keep doing that, but we can extend it to training less privileged young people, and young people who might not be what you'd describe as 'academic'. We're working with the local colleges to make that happen.

"I want to give back to the community that I grew up in, that's one of the reasons I always say that we're a business that was born in Cleator Moor and we're a business that will stay in Cleator Moor."





# Delivering maximum social impact

## What is social impact?

For social impact manager **Stuart**, it is about making sure that we get maximum value from our work for the communities that we operate in.

“Social impact to me means that we have a much fairer community in West Cumbria and Warrington, that there’s opportunities for people to access high paid high skilled jobs, that there’s support available to address any issues and needs that people may be going through, and that we’ve got an area that we live in and that we’re proud of.

“I say that as a local, born and bred in West Cumbria. It is a really rewarding role working in social impact, seeing the difference we are making and the difference it’s going to make for my kids when they grow up as well.

“I do get a lot of pride in my role, seeing some of the developments that we’ve supported pop up in the community, knowing that I’ve had a role in making that happen and seeing the difference it is making, it’s a really good feeling.”

- i THE MISSION:**  
To create value for our local communities through the delivery of our purpose
- ✓ 2022/23 CHALLENGE:**  
Support projects aligned to our social impact strategy



**SiX**  
Social impact multiplied



### Our social impact vision:

Our mission enables resilient economies and supports thriving communities closest to our sites.

Our Social Impact Strategy contains five social impact objectives:

- **Resilient economies:** to enable inclusive growth in the capacity, diversity and capability of our local economies.
- **Thriving communities:** to assist our communities to thrive by supporting sustainable activities that create self-reliance and independence.
- **Social value chains:** to create social impact with our supply chain.
- **Sustainable incomes:** to improve access to sustainable incomes, beyond Sellafield Ltd, by increasing skills, knowledge, aspirations and access to opportunities.
- **Collective impact:** to leverage social impact and investment by working with our stakeholders, partners and communities to practice an integrated approach and culture of delivery.

Supported by one enabling objective:

- **Improve performance:** to optimise social impact by measuring and evaluating our performance.

**“Our biggest challenge is driving social impact value from the £1 billion+ we spend with our supply chain every year.”**



### **How is social impact delivered?**

“We deliver social impact in a number of ways. We invest up to £10 million in social impact projects every year and we support our employees who give their time and skills to support community programmes and deliver volunteer roles.

“We have a grant funding programme where we work with our partners to develop new initiatives that will address community issues and needs.

“We also work with our supply chain. We spend over £1 billion every year with our supply chain so the biggest challenge we’ve got is driving social impact value from that spend. We put social impact expectations into contracts and encourage our supply chain partners to align their social impact work with ours so that we can have the greatest collective impact.

“We’re doing some really good work on that at the moment, and I’m really excited to see how that progresses.

“For example, one of my personal highlights from 2022/23 was the introduction of a reading programme in schools that was developed with the Programme and Project Partners. Evidence was telling us that reading attainment levels in West Cumbrian schools were lower than they should be, so we worked with the partners and their supply chain to match up employee volunteers with more than 100 young people. They’d meet virtually to read together, helping the youngsters to improve their reading and to increase their confidence. It was a completely different way of interacting with education from what we’ve previously done.

### **Not all social impact is visible**

“We’ve developed some really big, visible social impact projects, such as turning the derelict bus station in Whitehaven into a business incubator hub and Barclays Eagle Lab (see page 60).

“We’ve helped to refurbish two lighthouses on Whitehaven harbour (see page 62) and, in Warrington, we’ve helped to develop a the Warrington Youth Zone (see page 61).

“There are also social impact projects that we deliver that are much less visible, and that perhaps go under the radar. Things like investing in local social enterprises so that they can grow and thrive (see page 59).

**To read our social impact strategy visit [GOV.UK/SellafieldLtd](https://www.gov.uk/sellafielddtd)**

# Supporting social enterprises

We provide funding to Transforming West Cumbria, a programme of six projects that are designed to address areas of need in our community.

One of those projects helps people to create and grow social enterprises. People like **Bethany**.

"I set up the Lake District Academy of Theatre Arts, a non-profit social enterprise that aims to give children access to professional but also affordable theatre and arts classes.

"Growing up I went to a range of performing arts classes and activities before ultimately going to theatre school, so I know how expensive it can be.

"I received a grant of £1,000 through Transforming West Cumbria and also access to a range of workshops

run by the Centre for Leadership Performance. Each workshop focused on a different element of running a business, from marketing and business plans to training and business insurances. Having the knowledge of what I needed to do was so helpful.

"Thanks to that knowledge and the funding I could complete safeguarding training and buy the insurances I needed to be able to operate safely.

**"Every penny that I make goes back into the business so that we can keep growing."**

"Having this business means that I can keep doing something that I love – performing and teaching performing – while also staying in an area that I love."

**i THE MISSION:**  
To create value for our local communities through the delivery of our purpose

**✓ 2022/23 CHALLENGE:**  
Help social enterprises grow through the Transforming West Cumbria programme



## Social Impact

# Co-Lab grows business in Bus Station

- i THE MISSION:**  
To create value for our local communities through the delivery of our purpose
- ✓ 2022/23 CHALLENGE:**  
Create an active business hub in the refurbished Bus Station

Through our Social Impact, Multiplied programme we want to help create a resilient and diverse local economy that isn't reliant on the nuclear industry.

That's why we invested the funding needed to turn the once derelict bus station in Whitehaven into a business hub. As well as attracting the first Barclays Eagle Lab outside of a major conurbation, the Bus Station is already helping new businesses develop and grow, including Co-Lab Engineering.

For Managing Director **Clyne**, there is no better place than West Cumbria to start a new business.

"Sellafield investing in the community beyond its mission is really encouraging because ultimately once that mission is complete, we need to ensure the long-term resilience of the local economy.

"The way that we can do that is by leveraging the skills that we've got and enabling them to service other industries and sectors.

"Co-Lab Engineering is proof that it is possible. We started as a business in August 2022 and we're already supporting businesses across industries and sectors. That includes defence where we've developed a submersible ROV that tackles the problem of biofouling on marine life and vessels. We're supporting the agricultural sector with the development of new sensor technologies which will ultimately aid in calf health.

"We're also developing a compact hydro-energy device in collaboration with another business which will ultimately support the energy mix in the UK and internationally as well.



"Being in the Bus Station has made all of this possible because we've had access to the 'maker space' for prototyping and early-stage concept refining. It also gives us access to some of the support and mentoring programmes offered by the Bus Station and by Barclays in the Eagle Lab. For example, we're part of the carbon 13 accelerator programme which will ultimately see us seek investment funding in one of our early-stage projects to take it to market.

"West Cumbria is my home; I'm born and bred as they say. We've got a large skills base here and we need to share that with other industries, sectors and problems both nationally and internationally.

"There are so many opportunities I'd encourage anyone thinking of setting up a business to do it here."

# Warrington Youth Zone

In 2022/23 we became a founding patron of the Warrington Youth Zone, an activity centre that's open every day of the year to young people from the age of seven up to 18 years old, and up to 25 years old for people with special educational needs.

**Isabelle** is an arts co-ordinator there.

"Thanks to founding patrons like Sellafield Ltd, we are able to offer a whole range of activities for young people in our area, from arts to sports, and from regular activities to one-off events.

"As arts co-ordinator I look after the arts programmes we offer, from

music, radio and podcasting, to film and multimedia, as well as arts and crafts and performing arts.

**"Without founding patrons, we wouldn't be able to survive as an organisation.**

"It isn't just funding; Sellafield also supports our employability programme that aims to support young people with career opportunities and pathways to get into work. They also support our mentoring programme, matching volunteers from their employees with young people who might need a little bit more support.

- i THE MISSION:**  
To create value for our local communities through the delivery of our purpose
- ✓ 2022/23 CHALLENGE:**  
Support the creation of the Warrington Youth Zone

"There are so many ways that they've had a positive impact on our organisation, probably even more than they know.

"When I think back to the young people I met when the youth zone first opened compared to how they are today, with more confidence, more independence, and generally just better wellbeing, it is such a highlight for me."



# Creating pride of place

- i THE MISSION:**  
To create value for our local communities through the delivery of our purpose
- ✓ 2022/23 CHALLENGE:**  
Help refurbish two lighthouses in Whitehaven



**Trevor**, a retired Sellafield employee, volunteers for the Whitehaven Harbour Commissioner, and was instrumental in completing one of our most visible social impact projects this year; the refurbishment of Whitehaven's two lighthouses.

"It is fair to say that both lighthouses had seen better days and we knew that they needed to be refurbished.

"Not only are the buildings very old, but they are also listed buildings, which makes doing any work on them even more challenging.

"The extent of work needed was extensive, and as anyone who has done work on old buildings will tell you, once you start the work you find even more work that needs to be done.

"Thanks to Sellafield's social impact funding we were able to complete the refurbishment. Where possible we used local contractors on the work.

"In fact, with the exception of one contractor based in Plymouth, all of our partners are based within a 15 mile radius of the town.

"Between them they did a lot of work, replacing the electrics, the roof, lights, interiors, internal and external paintwork, not to mention fixing the crumbling brickwork.

"And they did it in all weathers. Working on a building at the end of a pier in the Irish Sea isn't without its challenges. Thanks to the rain, wind and waves, they had to rebuild the scaffolding four times. They wrapped a material around the scaffolding so that they could work in all weathers, but that had to be re-wrapped four times.

"It just goes to show what can be achieved when people work together.

"Seeing the lighthouses in the state they were was upsetting, it was upsetting to a lot of people. Seeing them now back to what they should be, how they should look, that's something I'm proud to have helped with."



