



Mission Progress Report

Published November 2023

Decommissioning the UK's earliest nuclear sites, caring for people and the environment

Foreword



David Peattie
NDA Group Chief Executive

THE MISSION

Ours is one of the most important environmental programmes in the world, protecting people and the planet, decommissioning the UK's early nuclear sites safely, securely and cost effectively with care for people and the environment.

THE MISSION PROGRESS REPORT

The Mission Progress Report aligns with our Strategy (4th edition) published in 2021. The document continues to demonstrate our approach to reporting progress against the mission, focusing on the four driving themes outlined in our strategy that are common across all sites and that help us to measure our achievements.

With a mission that lasts well into the next century, it's not every year that you get to say one of our 47 Strategic Outcomes is permanently complete. So I'm particularly proud to celebrate not one, but four additional outcomes being closed out in this report as a result of reprocessing ending at Sellafield after almost six decades.

Delivering the mission is about more than decommissioning sites and managing waste. It's also about doing it safely, securely and sustainably, as well as considering the legacies we leave. The health and wellbeing of our people, communities and the environment remains our highest priority. There is always more to do and, despite reporting strong safety results, we remain focused on further improvements.

The NDA has been trusted by Government to do more and it's an exciting time for us as preparations remain on track for Hunterston B to be the first advanced gas-cooled reactor to transfer to Magnox from EDF Energy for decommissioning when defueling completes. We're also working closely with the Ministry of Defence as the feasibility of the NDA group decommissioning its Vulcan site adjacent to Dounreay is assessed. As our mission grows we will incorporate this additional activity into the Mission Progress Report at the appropriate time.

David Peattie FREng HonFNucl
NDA Group Chief Executive

HOW TO READ THIS REPORT

This report is structured to illustrate the progress against the strategic objectives outlined in our strategy.

In the first two pages you'll see a very high-level summary of what the mission is and how far we have progressed since 2005.

Each of the four themes has an overview page to explain our objectives and the steps we need to take. Each step (or 'strategic outcome') shows the estimated inventory that has to be managed and what capability there is to deliver it.

We continue to build a more accurate picture of work that's still to be completed across our sites. As the data range matures over the next 120+ years, along with the reduction of uncertainty of the inventory, progression in the lifecycle and strategy development, it may well be subject to change. The figures contained within this report are correct up to 31 March 2023.

Excluded from this report are critical enablers, liquid and gaseous discharges, non-NDA liabilities and non-radioactive waste elements of our strategy.

Our strategic approach and themes

We use five strategic themes to describe all the activities needed to deliver the NDA's mission.

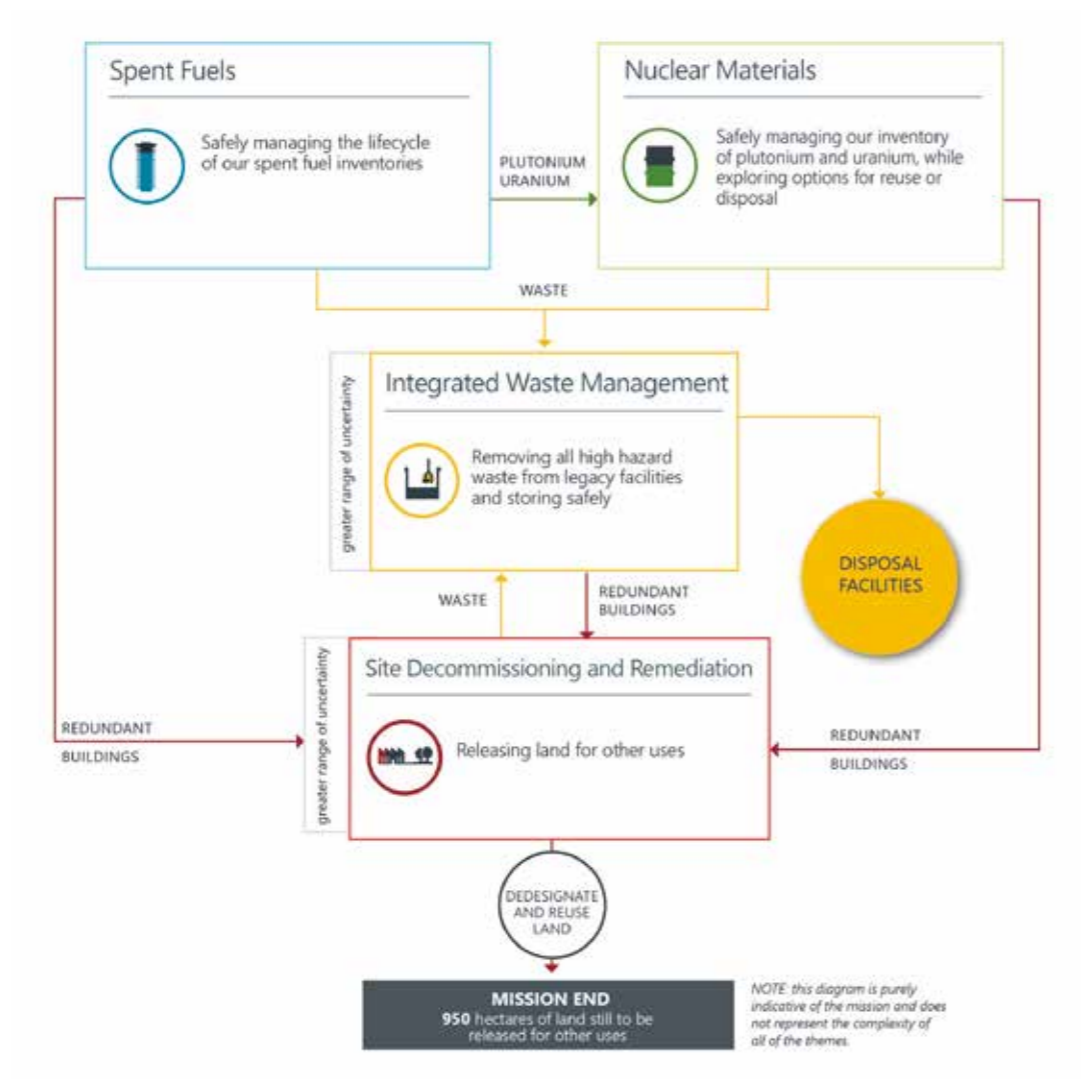
The first four strategic themes, Spent Fuels, Nuclear Materials, Integrated Waste Management and Site Decommissioning and Remediation relate directly to our clean-up and decommissioning and are known as **driving themes**. All data in this report relates to those four themes.

The fifth theme describes the important activities needed to support the delivery of our mission and

is known as **critical enablers**. The diagram below demonstrates how they interplay.

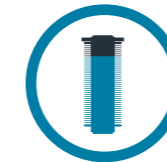
Currently, the most urgent task is dealing with sites' highest hazard materials: spent fuel, nuclear materials and highly-radioactive wastes.

Once the inventory has been made safe, the redundant nuclear facilities can be dismantled and demolished.



Our four driving themes

Spent Fuels



Our strategy defines our approach to managing the diverse range of spent fuels for which we are responsible, which are divided into Magnox, Oxide and Exotic. Once spent fuel is removed from a reactor, it is stored in a pond or dry store until it can be dispatched to Sellafield.

Reprocessing extracts materials (plutonium and uranium) that could potentially be re-used and also generates highly radioactive wastes, or fission products.

The NDA's strategy is to bring the reprocessing programme to an end. The Thermal Oxide Reprocessing Plant (THORP) and the Magnox reprocessing plant are now both closed. All remaining spent fuel will be safely stored until a permanent solution for disposal is available.

Our spent fuel work is separated into 15 strategic outcomes that we must deliver, see p4. For more detail on our spent fuels strategy see NDA Strategy 2021, p46-57.

Nuclear Materials



Our strategy defines our approach to dealing with the inventory of uranium and plutonium currently stored on some of our sites. These nuclear materials are by-products from different phases of the fuel cycle, either manufacturing or reprocessing. All nuclear materials must be managed safely and securely, by either converting them into new fuel or immobilising and storing them until a permanent UK disposal facility is available.

All of our plutonium is stored at Sellafield. Our uranium is located at a number of our sites and we are continuing to consolidate it at sites which we consider are best suited to its management.

Our nuclear materials work is separated into 10 strategic outcomes that we must deliver, outlined on page 4. For more detail on our nuclear materials strategy see NDA Strategy 2021, p58-67.

Integrated Waste Management



Our strategy considers how we manage all forms of waste arising from operating and decommissioning our sites, including waste retrieved from legacy facilities. Managing the large quantities of radioactive waste from electricity generation, research, the early defence programme and decommissioning is one of the NDA's biggest challenges. Some of this radioactive waste is in a raw (untreated) form, some has been treated and is being interim stored and, in the case of low level

waste, some has already been permanently disposed of. Retrieving, treating and interim storing the radioactive waste from Sellafield's four legacy ponds and silo facilities is the NDA's highest priority.

Our integrated waste management work is separated into 14 strategic outcomes that we must deliver, outlined on page 4. For more detail on our IWM strategy see NDA Strategy 2021, p68-85.

Site Decommissioning and Remediation



Our strategy defines our approach to decommissioning redundant facilities and managing land quality in order that each site can be released for its next planned use.

After the buildings on our sites have been decommissioned, decontaminated and dismantled, the land will be cleaned up to allow it to be released for other uses. At that point, its ownership would transfer to the new user of the land.

The NDA is currently assessing alternatives for the final stages of decommissioning that could lead to earlier release of land, continued employment and opportunities to reuse the land.

Our site decommissioning and remediation work is separated into eight strategic outcomes that we must deliver, outlined on page 4. For more detail on our SDR strategy see NDA Strategy 2021, p26-45.

PROGRESS OF STRATEGIC OUTCOMES - UP TO MARCH 2023

Spent Fuels

SPENT MAGNOX FUEL	2023
1 All sites defueled	100%
2 All legacy Magnox fuel retrieved	25%
3 All Magnox fuel reprocessing completed	100%
4 All remaining Magnox fuel in interim storage	17%
5 All remaining Magnox fuel disposed	0%
SPENT OXIDE FUEL	
6 All EDFE oxide fuel received	61%
7 All legacy oxide fuel retrieved	100%
8 All oxide fuel reprocessing completed	100%
9 All remaining oxide fuel in interim storage	57%
10 All remaining oxide fuel disposed	0%
SPENT EXOTIC FUEL	
11 All exotic fuel defueled	73%
12 All exotic fuel consolidated	62%
13 All exotic fuel reprocessing completed	100%
14 All remaining exotic fuel in interim storage	84%
15 All remaining exotic fuel disposed	0%

Nuclear Materials

PLUTONIUM	2023
16 All plutonium produced	100%
17 All plutonium consolidated	100%
18 A: All plutonium repacked in long-term storage B: All cans not suitable for extended storage repackaged	0% 53%
19 All plutonium in interim storage	0%
20 All plutonium reused or disposed	0%
URANIUM	
21 All uranium produced	100%
22 All uranium consolidated	82%
23 All uranium treated	4%
24 All uranium in interim storage	61%
25 All uranium reused or disposed	3%


Integrated Waste Management

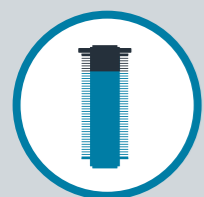
LOW LEVEL WASTE	2023
26 All LLW produced	8%
27 All LLW treated - to enable diversion or reuse	9%
28 All waste suitable for disposal in NDA facilities	16%
29 All waste suitable for permitted landfill disposed	5%
INTERMEDIATE LEVEL WASTE	
30 All ILW produced	33%
31 All legacy waste retrieved	9%
32 All ILW treated	10%
33 All ILW in interim storage	15%
34 All ILW disposed	0%
HIGH LEVEL WASTE	
35 All HLW produced	60%
36 All HLW treated	72%
37 All HLW waste in interim storage	81%
38 All overseas HLW exported	51%
39 All HLW disposed	0%

Site Decommissioning and Remediation

OPERATIONAL AND PLANNED	2023
40 All planned new buildings operational	TBD
41 All buildings primary function completed	39%
DECOMMISSIONING AND DEMOLITION	
42 All buildings decommissioned	22%
43 All buildings demolished or reused	21%
SITES	
44 All land delicensed or relicensed	9%
45 All land in End State - all planned physical work complete	43%
46 All land demonstrated as suitable for reuse	9%
47 All land de-designated or reused	9%

950 hectares of land still to be released for other uses

 Strategic outcomes achieved 2022/2023



Spent Fuels

Spent Magnox Fuel		Spent Oxide Fuel		Spent Exotic Fuel	
Opening stock	2,810 te	Opening stock	3,150 te	Opening stock	194 te
Defueling	4,100 te	Receiving	5,220 te	Defueling	33 te
Legacy	500 te	Total	8,370 te	Total	227 te
Total	7,410 te				

OBJECTIVE

To ensure safe, secure and cost-effective lifecycle management of our spent fuels - *Strategy 2021, p46*

WHAT ARE SPENT FUELS?

Fuel from a nuclear reactor is 'spent' once it has been used to generate electricity.

HOW ARE THE FUELS MANAGED?

Spent fuels are consolidated at Sellafield for management. They are placed in safe and secure interim storage in line with regulatory requirements pending a future decision on whether to classify them as waste for disposal in a GDF. For planning purposes, we assume that the remaining spent fuels will be disposed of in a GDF.

WHAT HAS HAPPENED SINCE 2005?

The Magnox reactors are now all defuelled and most fuel has been reprocessed. THORP completed reprocessing operations of oxide fuels in 2019. The Magnox reprocessing plant, which was Sellafield's last reprocessing facility finished reprocessing Magnox fuel in July 2022 with plant washout continued until March 2023.

WHAT HAS TO HAPPEN NEXT?

No more spent fuels will be reprocessed. Sellafield continues to receive oxide fuel under commercial contracts with EDF Energy. All remaining spent fuel will be placed in interim storage pending a decision whether to classify it as waste for disposal.



STRATEGIC OUTCOMES - steps to achieving our mission

	Progress up to 2023	End date	Completed	Mission End
SPENT MAGNOX FUEL				
1 All sites defueled	100%	2020	COMPLETED	REUSED/DISPOSAL
2 All legacy Magnox fuel retrieved	25%	2039		
3 All Magnox fuel reprocessing completed	100%	2022	COMPLETED	
4 All remaining Magnox fuel in interim storage	17%	2042		
5 All remaining Magnox fuel disposed	0%	2125		
SPENT OXIDE FUEL				
6 All EDFE oxide fuel received	61%	2035		REUSED/DISPOSAL
7 All legacy fuel retrieved	100%	2016	COMPLETED	
8 All oxide fuel reprocessing completed	100%	2019	COMPLETED	
9 All remaining oxide fuel in interim storage	57%	2035		
10 All remaining oxide fuel disposed	0%	2125		
SPENT EXOTIC FUEL				
11 All exotic fuel defueled	73%	2024		REUSED/DISPOSAL
12 All exotic fuel consolidated*	62%	2028		
13 All exotic fuel reprocessing completed	100%	2023	COMPLETED	
14 All remaining exotic fuel in interim storage	84%	2028		
15 All remaining exotic fuel disposed	0%	2125		

*irradiated fuel only



Spent Fuels

To ensure safe, secure and cost-effective lifecycle management of our spent fuels.
Strategy 2021, p46

Spent Magnox Fuel	
Opening stock	2,810 te
Defueling	4,100 te
Legacy	500 te
Total	7,410 te

SPENT MAGNOX FUEL - To ensure safe, secure and cost-effective lifecycle management of spent Magnox fuels. *Strategy 2021, p52.*

In 2023, work continues to retrieve high hazard fuel from Sellafield and safely store the spent fuel on an interim basis.

STRATEGIC DECISIONS

Outputs

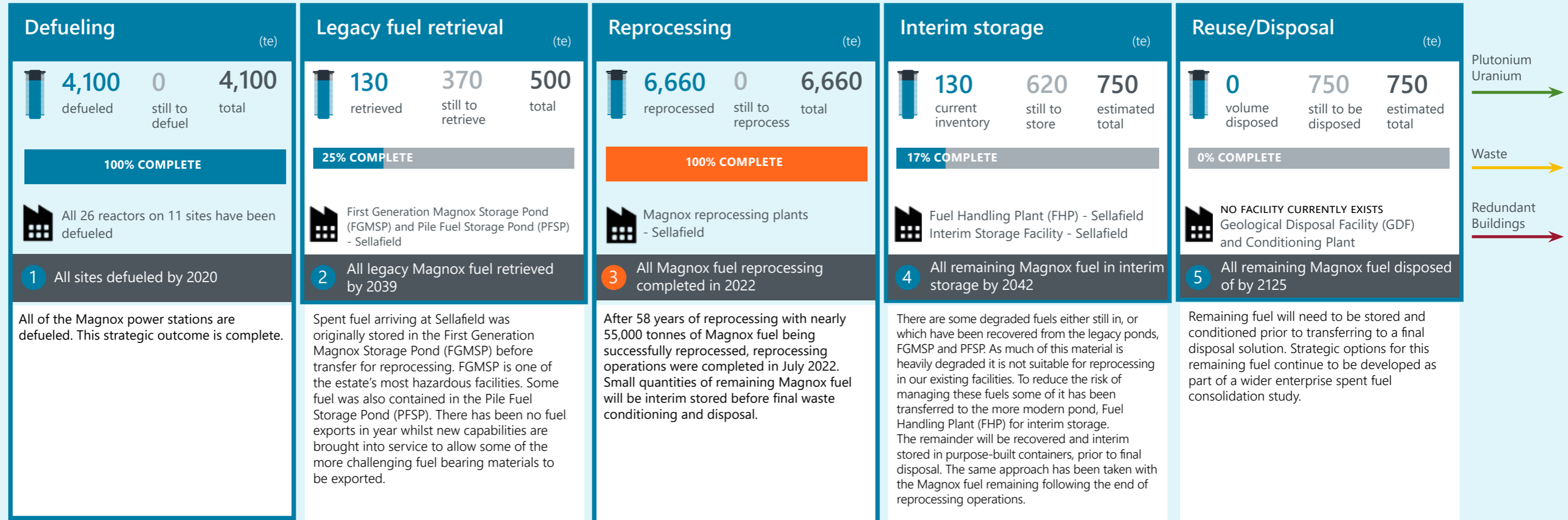
Opening stock 2005

2,810te

Inventory

Capability

Strategic Outcome



Plutonium Uranium →

Waste →

Redundant Buildings →



Defueling activity at one of the Magnox stations



Pile Fuel Storage Pond - Sellafield



Magnox Reprocessing Plant - Sellafield



Fuel Handling Plant - Sellafield



Artist's impression of a Geological Disposal Facility



Spent Fuels

To ensure safe, secure and cost-effective lifecycle management of spent fuels.
Strategy 2021, p46

ESTIMATED LIFETIME INVENTORY - SINCE 2005

Spent Oxide Fuel	
Opening stock	3,150 te
Receiving	5,220 te
Total	8,370 te

SPENT OXIDE FUEL - To ensure safe, secure and cost-effective lifecycle management of spent oxide fuels. *Strategy 2021, p50.*

Opening stock 2005

In 2023, we continue to receive fuel from EDF Energy sites. Reprocessing is now complete and we safely store the remaining spent fuel on an interim basis.

STRATEGIC DECISIONS

Outputs

3,150te

Receipts

3,170	2,050	5,220
received	still to be received	total

61% COMPLETE

THORP Receipt and Storage Pond - Sellafield

6 All EDF oxide fuel received by 2035

The NDA is committed, through commercial contracts, to receiving and managing spent fuel (including 3,150te opening stock) from EDFE's seven AGR power stations in England and Scotland. The last of these power stations is due to close in the early 2030's, however EDFE has declared its intention to run them for as long as possible, providing it is safe and economic to continue.

Legacy fuel retrieval

3	0	3
retrieved	still to retrieve	total

100% COMPLETE

Pile Fuel Storage Pond (PFSP) - Sellafield

7 All legacy fuel retrieved in 2016

Early spent oxide fuel was consigned to the PFSP and has all been removed for storage in more modern facilities.

Reprocessing

3,610	0	3,610
reprocessed	still to reprocess	total

100% COMPLETE

THORP Reprocessing Plant - Sellafield

8 All oxide fuel reprocessing completed in 2019

The NDA, after studying options over a number of years, concluded in 2012 that THORP should close following completion of the current contracts. To ensure this remains the most viable and cost-effective option, the NDA has identified how to provide sufficient capacity at THORP to store all remaining fuel that is not reprocessed. This total included the opening stock of 3,150te.

Interim storage

2,710	2,050	4,760
current inventory	still to store	estimated total

57% COMPLETE

THORP Receipt and Storage Pond - Sellafield

9 All remaining oxide fuel in interim storage by 2035

Our strategy is to consolidate all spent AGR fuel from the EDF AGR stations in a single pond in the THORP facility at the Sellafield site, and interim store all oxide fuels pending a future decision on whether to classify the fuel as waste for disposal in a GDF.

Reuse/Disposal

0	4,760	4,760
volume disposed	still to be disposed	estimated total

0% COMPLETE

NO FACILITY CURRENTLY EXISTS Geological Disposal Facility (GDF) and Conditioning Plant

10 All remaining oxide fuel disposed of by 2125

Remaining fuel will need to be conditioned prior to transferring to a final disposal solution. Strategic options are currently being developed for the final management of this fuel.

Plutonium Uranium

Waste

Redundant Buildings

Inventory

Capability

Strategic Outcome



Hinkley Point A and the EDF owned (B) station



Shearing operations - Sellafield



THORP - Sellafield



THORP Receipt and Storage Pond - Sellafield



Artist's impression of a Geological Disposal Facility



Spent Fuels

To ensure safe, secure and cost-effective lifecycle management of spent fuels.
Strategy 2021, p46

Spent Exotic Fuel	
Opening stock	194 te
Defueling	33 te
Total	227 te

SPENT EXOTIC FUEL - To ensure safe, secure and cost-effective lifecycle management of spent exotic fuels. *Strategy 2021, p54.*

Opening stock 2005

194te

Inventory

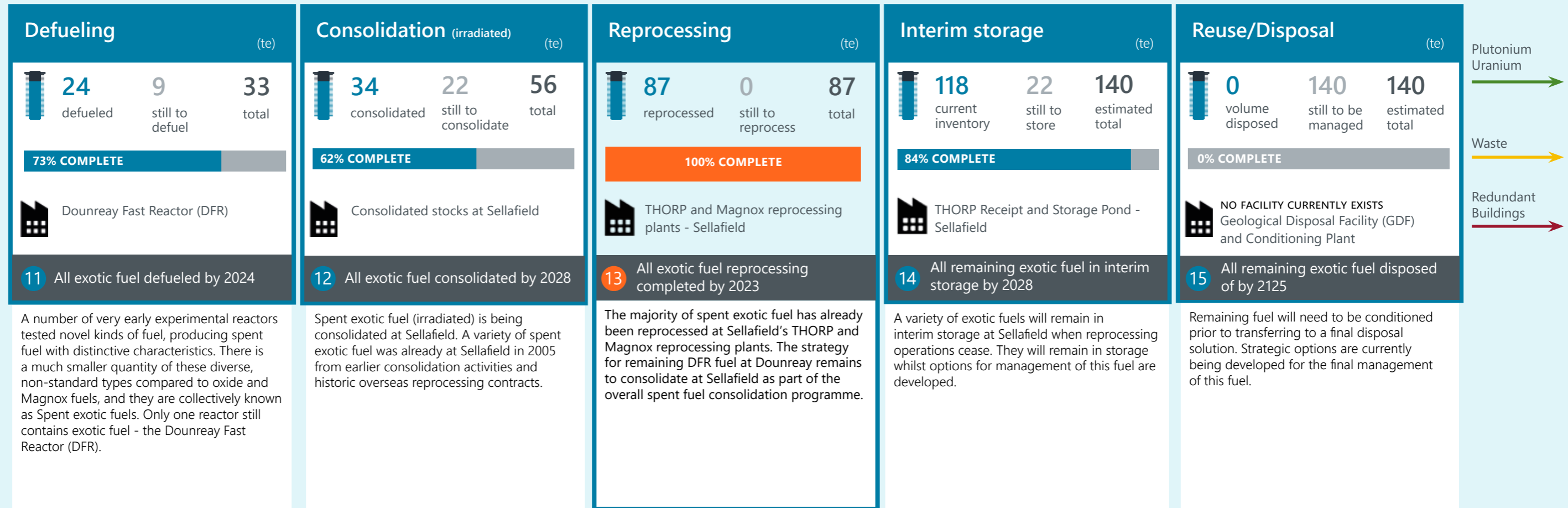
Capability

Strategic Outcome

In 2023, work continues to defuel the Dounreay Fast Reactor and consolidate exotic fuel at Sellafield.

STRATEGIC DECISIONS

Outputs



Dounreay Fast Reactor



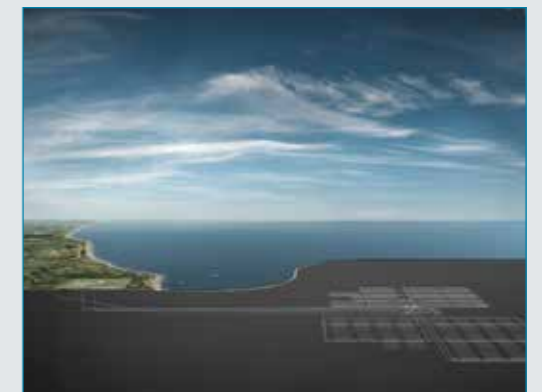
Transporting exotic fuel to Sellafield



Magnox Reprocessing Plant - Sellafield



THORP Receipt and Storage Pond - Sellafield



Artist's impression of a Geological Disposal Facility



Nuclear Materials

ESTIMATED LIFETIME INVENTORY - 2005 TO MISSION END

Plutonium		Uranics	
Opening stock	104 te	Opening stock	63,000 te
Produced	37 te	Produced	7,000 te
Total	141 te	Total	70,000 te

OBJECTIVE

To ensure safe, secure and cost-effective lifecycle management of our nuclear materials - *Strategy 2021, p58*

WHAT ARE NUCLEAR MATERIALS?

The NDA owns an inventory of plutonium and uranium. Known collectively as 'nuclear materials', all are by-products from different phases of the fuel cycle, including the reprocessing of spent fuel.

HOW ARE THE MATERIALS MANAGED?

All nuclear materials are stored safely and securely under stringent management arrangements, in accordance with the requirements of the International Atomic Energy Agency (IAEA), as well as UK law, which are overseen by the independent Office for Nuclear Regulation (ONR) which is responsible for regulating safety and security across the UK.

WHAT HAS HAPPENED SINCE 2005?

The NDA is working with UK government and suppliers on options to put plutonium beyond reach. The NDA has largely completed uranium production and consolidation.

WHAT HAS TO HAPPEN NEXT?

All nuclear materials will be either converted into new fuel for nuclear reactors or immobilised and stored until a permanent UK disposal facility is developed. Consolidation of plutonium is now complete. Consolidation of uranium remains ongoing. Some uranium must be treated and repackaged for interim storage, while Sellafield's plutonium inventory will be repackaged. Plutonium will be repackaged in a form suitable for long term storage. Plutonium repackaging is taking place in two stages. Those cans which are the highest priority for repackaging are being dealt with now as part of a first phase using existing plant. This is taking place prior to the construction of a new facility which will enable repackaging of a large number of cans. The government will reach a decision on possible re-use or disposal of plutonium following completion of the technical studies.



STRATEGIC OUTCOMES - steps to achieving our mission

	Progress up to 2023	End date	Completed	Mission End
PLUTONIUM				
16 All Plutonium produced	100%	2023	COMPLETED	REUSED/DISPOSAL
17 All Plutonium consolidated	100%	2019	COMPLETED	
18 A: All plutonium repacked in long term storage	0%	2060		
B: All cans not suitable for extended storage repackaged	53%	2060		
19 All Plutonium in interim storage	0%	2060		
20 All Plutonium reused or disposed	0%	2120		
URANIUM				
21 All Uranium produced	100%	2023	COMPLETED	REUSED/DISPOSAL
22 All Uranium consolidated	82%	2025		
23 All Uranium treated	4%	2055		
24 All Uranium in interim storage	61%	2055		
25 All Uranium reused or disposed	3%	2120		



Nuclear Materials

To ensure safe, secure and cost-effective lifecycle management of our nuclear materials.
Strategy 2021, p58

ESTIMATED LIFETIME INVENTORY - 2005 TO MISSION END

Plutonium	
Opening stock	104 te
Produced	37 te
Total	141 te

PLUTONIUM - To ensure the safe and secure management of separated plutonium held by the NDA and to work with the UK government to develop a long-term solution.
Strategy 2021, p60

Opening stock 2005

In 2023, work continues to provide the capability and capacity to treat and store plutonium at Sellafield.

STRATEGIC DECISIONS

Outputs

104te

Inventory

Capability

Strategic Outcome

Quantities produced (te)

37	0	37
quantity produced	still to be produced	total

100% COMPLETE

Magnox and THORP reprocessing - Sellafield

16 All plutonium produced by 2023

When the NDA was established, 104 tonnes of plutonium had already been produced from reprocessing. Magnox reprocessing has now finished and there will be no more large quantities of plutonium produced. There will possibly be a small amount of plutonium produced as part of the remaining Post Operational Clean Out (POCO) work. The amount produced is unlikely to change the value, with a final inventory of 140 tonnes.

Consolidation (te)

2	0	2
consolidated	still to consolidate	total

100% COMPLETE

Consolidated stocks at Sellafield

17 All plutonium consolidated by 2019

The NDA took the decision to consolidate all plutonium in new storage at Sellafield and this consolidation is complete. The plutonium inventory will however need repacking into long-term storage containers.

Repacking (te)

0	140	140
repacked	still to repack	total

18A 0% COMPLETE

18B **53% COMPLETE** **3** **3** **6**
repacked still to repack total

NO FACILITY CURRENTLY EXISTS
 SPRS Re-treatment Plant (SRP) currently in construction phase - Sellafield

18 A: All plutonium repacked in long-term storage by 2060
 B: All cans not suitable for extended storage repackaged by 2060

Our aim is to gradually transfer all plutonium into the most modern facilities over the next few decades. To ensure that the plutonium packages can be safely stored in SPRS, they will be repackaged and, where appropriate, some plutonium will be treated to stabilise it for long-term storage. A major new facility, SRP, is being constructed, to repackage materials to support this strategy. This facility will repackage and, where appropriate, retreat all of the plutonium packages. Some older packages are to be repacked in existing plants to ensure their safe management in the short to medium term.

Interim storage (te)

0	140	140
current inventory	still to store	estimated total

0% COMPLETE

Product and Residue Stores - Sellafield

19 All plutonium in interim storage by 2060

Following repacking, all containers will be stored in the Sellafield Product and Residue Stores pending a decision on future management. New store capacity in future years will be required to achieve the outcome.

Reuse/Disposal (te)

1	140	141
volume reused	still to be reused or disposed	estimated total

0% COMPLETE

NO FACILITY CURRENTLY EXISTS
 Geological Disposal Facility (GDF)

20 All plutonium reused or disposed of by 2120

The plutonium reused reflects plutonium that was made into MOX fuel in the Sellafield MOX Plant, before the plant closed in 2011, and returned to overseas customers for use in their Light Water Reactors.

Waste →

Redundant Buildings →



Magnox Reprocessing Plant



One of the NTS fleet of nuclear transport ships



THORP Product Store - Sellafield



Plutonium containers



Artist's impression of a Geological Disposal Facility



Nuclear Materials

To ensure safe, secure and cost-effective lifecycle management of our nuclear materials.
Strategy 2021, p58

ESTIMATED LIFETIME INVENTORY - 2005 TO MISSION END

Uranium	
Opening stock	63,000 te
Produced	7,000 te
Total	70,000 te

URANIUM - To continue safe and secure storage of our uranium inventory, to support its reuse where cost-effective and to ensure its final disposition. *Strategy 2021, p63*

Opening stock 2005

63,000te

Inventory

Capability

Strategic Outcome

In 2023, work continues to consolidate uranics at Capenhurst.

STRATEGIC DECISIONS

Outputs

Quantities produced (te)	Consolidation (te)	Treatment (te)	Interim storage (te)	Reuse/Disposal (te)															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> 7,000 quantity produced</td> <td style="width: 33%;">0 still to be produced</td> <td style="width: 33%;">7,000 total</td> </tr> </table> <div style="background-color: orange; text-align: center; padding: 2px; font-weight: bold;">100% COMPLETE</div> <p> Magnox reprocessing - Sellafield</p>	7,000 quantity produced	0 still to be produced	7,000 total	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> 12,000 consolidated</td> <td style="width: 33%;">3,000 still to consolidate</td> <td style="width: 33%;">15,000 total</td> </tr> </table> <div style="background-color: green; text-align: center; padding: 2px; font-weight: bold;">82% COMPLETE</div> <p> Consolidated stocks at Capenhurst</p>	12,000 consolidated	3,000 still to consolidate	15,000 total	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> 1,000 treated</td> <td style="width: 33%;">26,000 still to treat</td> <td style="width: 33%;">27,000 total</td> </tr> </table> <div style="background-color: grey; text-align: center; padding: 2px; font-weight: bold;">4% COMPLETE</div> <p> NO FACILITY CURRENTLY EXISTS Legacy Cylinder Facility currently in initiation phase - Capenhurst</p>	1,000 treated	26,000 still to treat	27,000 total	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> 42,000 inventory in interim storage</td> <td style="width: 33%;">26,000 still to store</td> <td style="width: 33%;">68,000 estimated total</td> </tr> </table> <div style="background-color: green; text-align: center; padding: 2px; font-weight: bold;">61% COMPLETE</div> <p> Uranium store - Capenhurst THORP Product Store - Sellafield</p>	42,000 inventory in interim storage	26,000 still to store	68,000 estimated total	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> 2,000 re-used/disposed</td> <td style="width: 33%;">68,000 still to be re-used/disposed</td> <td style="width: 33%;">70,000 estimated total</td> </tr> </table> <div style="background-color: grey; text-align: center; padding: 2px; font-weight: bold;">3% COMPLETE</div> <p> NO FACILITY CURRENTLY EXISTS Geological Disposal Facility (GDF)</p>	2,000 re-used/disposed	68,000 still to be re-used/disposed	70,000 estimated total
7,000 quantity produced	0 still to be produced	7,000 total																	
12,000 consolidated	3,000 still to consolidate	15,000 total																	
1,000 treated	26,000 still to treat	27,000 total																	
42,000 inventory in interim storage	26,000 still to store	68,000 estimated total																	
2,000 re-used/disposed	68,000 still to be re-used/disposed	70,000 estimated total																	
<p>21 All uranium produced by 2023</p> <p>No further uranium will be produced as spent fuel reprocessing at Sellafield has completed.</p>	<p>22 All uranium consolidated by 2025</p> <p>The NDA has consolidated the majority of uranium stock at Capenhurst. Work is underway to consolidate the remaining quantity of uranium on stock from the completed Magnox fuel reprocessing at Sellafield, as well as relatively small quantities of uranium from Dounreay, Magnox sites and Springfields to Capenhurst.</p>	<p>23 All uranium treated by 2055</p> <p>Uranium hexafluoride (HEX) is a chemically hazardous by-product of uranium enrichment. The NDA is seeking to put in place the capability to re-package 26,000tU of HEX at Capenhurst. After repackaging, the HEX will be treated to remove the chemical hazard, so that it can be interim stored pending re-use/disposal.</p>	<p>24 All uranium in long-term storage by 2055</p> <p>Uranium (NDA-owned and NDA customer material) will be interim stored at Capenhurst and Sellafield until it can be re-used or a decision is taken to dispose of it.</p>	<p>25 All uranium reused or disposed of by 2120</p> <p>Remaining uranium may need to be conditioned prior to transferring to a final disposal solution. Strategic options are currently being developed for the final management of this nuclear material.</p>															

Waste →

Redundant Buildings →



Magnox Reprocessing Plant



Capenhurst



Current uranium storage at Capenhurst



Part of the uranium inventory at Capenhurst



Artist's impression of a Geological Disposal Facility



Integrated Waste Management

ESTIMATED LIFETIME INVENTORY TO DISPOSE - 2005 TO MISSION END

Low Level Waste		Intermediate Level Waste		High Level Waste	
Raw waste	4,140,000m ³	Raw waste	192,000m ³	Raw waste	4,550m ³
Packaged waste	313,000m ³	Packaged waste	471,000m ³	Packaged waste	1,500m ³

OBJECTIVE

To ensure that wastes are managed in a manner that protects people and the environment, now and in the future, and in ways that comply with government policies and provide value for money - *Strategy 2021, p68*

WHAT IS INTEGRATED WASTE MANAGEMENT?

Large quantities of diverse radioactive waste have been produced since the 1950s, and will continue to arise for decades to come. Managing these radioactive wastes, along with conventional waste, is one of the NDA's biggest challenges.

HOW ARE THE WASTES MANAGED?

Wastes are characterised and treated appropriately as informed by radiological, chemical and physical properties and associated handling requirements, before being packaged for long-term storage and/or transport and disposal. LLW is disposed of and higher activity waste is stored pending development of a final disposal route. Effective and optimised waste management is an essential requirement for the delivery of the mission and is a significant part of the programme.

WHAT HAS HAPPENED SINCE 2005?

Since 2005 considerable progress has been made with our preparations for retrievals of ILW from legacy facilities, which has now commenced. The NDA has taken the decision to consolidate some ILW at regional stores, avoiding the need to construct a store at each site. We are repackaging material where necessary and investigating more sustainable treatments for all waste categories. We've followed the waste hierarchy principle and put in place a range of waste management services that has preserved capacity at the Low Level Waste Repository (LLWR). The majority of HLW has been vitrified and is in safe and secure storage pending the availability of a geological disposal facility. The NDA advocates a risk-informed strategy where radioactive wastes are managed according to the nature of the waste (radiological, physical and chemical) rather than simply the radioactive waste category they fall into. We have published our Treatment Strategic Position to clearly articulate why waste treatment is an important part of the NDA mission and why we invest significant time and effort on it. This supports the approach taken by waste producers who are developing and implementing enhanced waste treatment techniques and supports the pursuit of strategic opportunities.

WHAT HAS TO HAPPEN NEXT?

A key aim for the NDA is to secure continuous retrieval operations at our highest priority legacy facilities, which will take a number of decades to complete. We are constructing new waste treatment plants and storage facilities across the NDA estate and continue to use off-site supply chain capability as appropriate. Permanent disposal facilities must be constructed for all higher activity waste. The NDA's risk-informed radioactive waste strategy also presents the opportunity to explore the possibility of near-surface disposal for some of the ILW inventory, which is highlighted in the UK government consultation on policy proposals for managing radioactive substances and nuclear decommissioning. The Integrated Waste Management Programme has been launched that helps to implement our strategy by delivering group-wide initiatives that Nuclear Waste Services (NWS) manage on our behalf.



STRATEGIC OUTCOMES - steps to achieving our mission

LOW LEVEL WASTE

	Progress up to 2023	End date	Completed	Mission End
26 All LLW produced	8%	2127		LLWR + LANDFILL
27 All LLW treated - to enable diversion or reuse	9%	2127		
28 All waste suitable for disposal in NDA facilities	16%	2127		
29 All waste suitable for permitted landfill disposed	5%	2127		

INTERMEDIATE LEVEL WASTE

	Progress up to 2023	End date	Completed	Mission End
30 All ILW produced	33%	2120		DISPOSAL
31 All legacy waste retrieved	9%	2060		
32 All ILW treated	10%	2120		
33 All ILW in interim storage	15%	2120		
34 All ILW disposed	0%	2314		

HIGH LEVEL WASTE

	Progress up to 2023	End date	Completed	Mission End
35 All HLW produced	60%	2039		DISPOSAL
36 All HLW treated	72%	2039		
37 All HLW in interim storage	81%	2039		
38 All overseas HLW exported	51%	2029		
39 All HLW disposed	0%	2104		



Integrated Waste Management

To ensure that wastes are managed in a manner that protects people and the environment, now and in the future, and in ways that comply with government policies and provide value for money. *Strategy 2021, p68*

ESTIMATED LIFETIME INVENTORY TO DISPOSE - 2005 TO MISSION END

Low Level Waste
 Raw waste 4,140,000m³
 Packaged waste 313,000m³

LOW LEVEL WASTE

To manage radioactive waste and dispose of it where possible, or place it in safe, secure and suitable storage, ensuring that we implement the policies of UK government and the devolved administrations - *Strategy 2021, p72*

In 2023, work continues to divert LLW away from the Low Level Waste Repository prolonging the life of the facility.

Outputs

Inventory

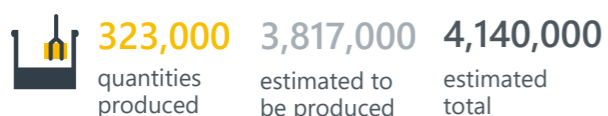
Capability

Strategic Outcome

Redundant Buildings →

Quantities produced

(raw waste vol.m³)



8% COMPLETE

LLW produced from NDA operations and decommissioning

26 All LLW produced by 2127

LLW and VLLW (a sub category of LLW) are produced from the maintenance, operation and decommissioning of facilities across the NDA group; and are reported as aggregated totals here since 2021. These wastes are the largest volume radioactive waste arisings in the NDA group, but account for only 0.0001% of the overall radioactivity. We continue to progress the mission across all areas, noting a slight increase overall volume.

Diversion

(raw waste vol.m³)



9% COMPLETE

Diversion capabilities include - metal treatment and incineration

27 All LLW treated - to enable diversion or reuse by 2127

National and NDA Strategy promotes the application of the waste hierarchy to LLW management to ensure that the group makes the best use of available disposal capacity. Waste diversion performance has remained high in 2022/23, with cross group diversion rates >95%, indicating that application of the waste hierarchy is business as usual across the NDA group.

Disposal (NDA Facilities)

(packaged waste vol.m³)



16% COMPLETE

x2 sites Low Level Waste Repository and Dounreay

28 All waste suitable for disposal in NDA facilities by 2127

Solid LLW is disposed of at two facilities - the Low Level Waste Repository (the UK's primary LLW disposal facility) and the Dounreay on-site disposal facility (which only manages waste arisings from Dounreay). LLW disposal rates continue to remain lower than pre-pandemic arisings, typically <50%. There is a slight reduction in forecast volumes as we have seen predictions of a greater level of waste being diverted away from the LLWR site to alternative treatment and disposal routes, reinforcing our application of the waste hierarchy.

Disposal (Landfill)

(imported vol.m³)



5% COMPLETE

A number of on site and off site licensed disposal routes.

29 All waste suitable for permitted land-fill disposed by 2127

VLLW is the lowest hazard LLW, mainly consisting of soils, spoil and rubble. Known as Very Low Level Waste (VLLW), it's principally disposed of at appropriately permitted landfill sites and some on-site facilities in the NDA group. Good progress on managing VLLW arisings has been maintained during 2022/23, again showing the benefit of applying our waste hierarchy.



LLW Repository



Metal melting - one of the ways of treating LLW



LLWR at Dounreay



Appropriate landfill sites can be used for VLLW



Integrated Waste Management

To ensure that wastes are managed in a manner that protects people and the environment, now and in the future, and in ways that comply with government policies and provide value for money. *Strategy 2021, p68*

ESTIMATED LIFETIME INVENTORY TO DISPOSE - 2005 TO MISSION END

Intermediate Level Waste
 Raw waste 192,000m³
 Packaged waste 471,000m³

INTERMEDIATE LEVEL WASTE - To manage radioactive waste and dispose of it where possible, or place it in safe, secure and suitable storage, ensuring that we implement the policies of UK government and the devolved administrations - *Strategy 2021, p72*

Opening stock 2005

In 2023, ILW continues to be produced with a focus on retrieving waste from legacy ponds and silos.

STRATEGIC DECISIONS

Outputs

10,800m³ raw waste in store 2005

Quantities produced (raw waste vol.m³)



33% COMPLETE

Waste from operations and decommissioning

30 All ILW produced by 2120

Legacy ponds & silos (raw waste vol.m³)



9% COMPLETE

New technology and capability projects to retrieve legacy waste

31 All legacy waste retrieved by 2060

Treatment (raw waste vol.m³)



10% COMPLETE

New capability required

32 All ILW treated by 2120

Interim storage (packaged waste vol.m³)



15% COMPLETE

New capability required

33 All ILW in interim storage by 2120

Disposal (packaged waste vol.m³)



0% COMPLETE

NO FACILITY CURRENTLY EXISTS Geological Disposal Facility (GDF)

34 All ILW disposed by 2314

Redundant Buildings →

ILW - waste exceeding the upper boundary for LLW that is not significantly heat generating - takes a variety of forms including: redundant nuclear reactor components, reactor core graphite, sludges from radioactive liquid effluent treatment, redundant plant equipment and some building fabric. As the NDA group projects and programmes mature, the volume of ILW will be subject to change as we reduce uncertainty in the inventory.

The Sellafield legacy ponds and silos represent some of the most complex and difficult global decommissioning challenges and are a key priority for the NDA group. A significant milestone this year was the start of waste exports from the Magnox Swarf Storage Silo which is one of the most hazardous facilities on the Sellafield site with a total of 16m³ of waste being exported. The retrievals operations are still in the initial learning and proving phase and the rate of retrievals will ramp up steadily over the coming years as further retrievals capability is brought into service. Retrievals continue from the legacy ponds (Pile Fuel Storage Pond and First Generation Magnox Storage Pond) but have proved challenging this year due to a variety of reasons including equipment reliability due to the mixed nature of the waste and the difficulties in bringing new retrievals capabilities into service.

Different forms of ILW are treated in different ways so they can be safely packaged and stored until a disposal facility is available. ILW treatment is ongoing using the many available treatment plants available across the NDA group and work is ongoing to design, build and commission new treatment facilities that are needed to complete this important stage of the ILW lifecycle.

Retrieved, treated, and packaged ILW undergoes safe storage until appropriate disposal facilities are available. 15% of the total packaged ILW to be produced over the lifetime of the NDA group is currently in safe storage. Further new stores will be required to enable safe storage of the remaining inventory at Sellafield and for NDA sites in Scotland.

Final disposal of ILW arising from the NDA group is reliant on the availability of the right disposal facilities. The NDA group is working with UK Government, local communities, regulators and technical specialists to identify a site for construction of a GDF for ILW arisings in England and Wales. The policy in Scotland is for near-site, near-surface management. Progress has been made with Community Partnerships for the GDF. The NDA is also engaging with UK and Welsh Governments to decide whether some ILW may be suitable for near-surface disposal which - subject to national policy and community acceptance - has the potential to be implemented earlier than the GDF. Public consultation on a new draft framework for managing radioactive substances and nuclear decommissioning has been issued.



ILW Magnox fuel cladding swarf



Retrieving waste from the legacy ponds



ILW Treatment and Storage at Sellafield



Trawsfynydd ILW Store



Artist's impression of a Geological Disposal Facility (GDF)



Integrated Waste Management

To ensure that wastes are managed in a manner that protects people and the environment, now and in the future, and in ways that comply with government policies and provide value for money. *Strategy 2021, p68*

ESTIMATED LIFETIME INVENTORY TO DISPOSE - 2005 TO MISSION END

High Level Waste	
Raw waste	4,550m ³
Packaged waste	1,500m ³

HIGH LEVEL WASTE - To manage radioactive waste and dispose of it where possible, or place it in safe, secure and suitable storage, ensuring that we implement the policies of UK government and the devolved administrations. *Strategy 2021, p72*

In 2023, work will continue to treat and store HLW on an interim basis.

Outputs

- Inventory
- Capability
- Strategic Outcome

Quantities produced	Treatment	Interim storage	Disposal/Export										
LIQUID (raw waste vol.m ³)	CONDENSED LIQUID (raw waste vol.m ³)	SOLID (packaged vol.m ³)	(packaged vol.m ³)										
<p>2,750 quantities produced</p> <p>1,800 still to produce</p> <p>4,550 total</p> <p>60% COMPLETE</p> <p>Highly Active Storage Tanks</p> <p>35 All HLW produced by 2039 (including post operational clean out)</p> <p>Highly Active Liquor (HAL) is a highly radioactive by-product of nuclear fuel reprocessing at the Sellafield site. The liquor is concentrated through evaporation and is stored in specially engineered Highly Active Storage Tanks prior to treatment. Total quantity to be managed has increased this year due to revised estimates provided by Sellafield.</p>	<p>542 treated</p> <p>215 still to treat</p> <p>757 total</p> <p>72% COMPLETE</p> <p>Waste Vitrification Plant</p> <p>36 All HLW treated by 2039</p> <p>HAL is converted into a solid form for storage and disposal through a process called vitrification. In this process, the liquor is mixed with crushed glass in a furnace to produce a solid, stable glass which is poured into stainless steel canisters.</p>	<p>1,220 current inventory</p> <p>280 still to store</p> <p>1,500 estimated total</p> <p>81% COMPLETE</p> <p>Vitrified Product Store (VPS)</p> <p>37 All HLW in interim storage by 2039</p> <p>The vitrified High Level Waste is stored in a purpose-built store - the Sellafield Vitrified Product Store(s) - until a UK disposal facility for HLW becomes available.</p>	<p>180 exported/discharged</p> <p>1,500 still to be exported or disposed</p> <p>1,680 estimated total</p> <p>11% COMPLETE</p> <table border="1"> <tr> <td>38</td> <td>51% COMPLETE</td> <td>180 exported</td> <td>170 still to export</td> <td>350 total</td> </tr> <tr> <td>39</td> <td>0% COMPLETE</td> <td>0 disposed</td> <td>1,330 still to dispose</td> <td>1,330 total</td> </tr> </table> <p>NO FACILITY CURRENTLY EXISTS Geological Disposal Facility (GDF)</p> <p>38 All overseas HLW exported by 2029</p> <p>39 All HLW disposed by 2104</p> <p>UK HLW disposal is pending the availability of a GDF; and the NDA group is working with government, local communities, regulators, and other stakeholders to make progress on delivering this essential capability. Sellafield returns reprocessed spent fuel to overseas customers in line with contractual requirements.</p>	38	51% COMPLETE	180 exported	170 still to export	350 total	39	0% COMPLETE	0 disposed	1,330 still to dispose	1,330 total
38	51% COMPLETE	180 exported	170 still to export	350 total									
39	0% COMPLETE	0 disposed	1,330 still to dispose	1,330 total									

Redundant Buildings →



HLW containers



Waste Vitrification Plant



Vitrified Product Store - Sellafield



Artist's impression of a Geological Disposal Facility



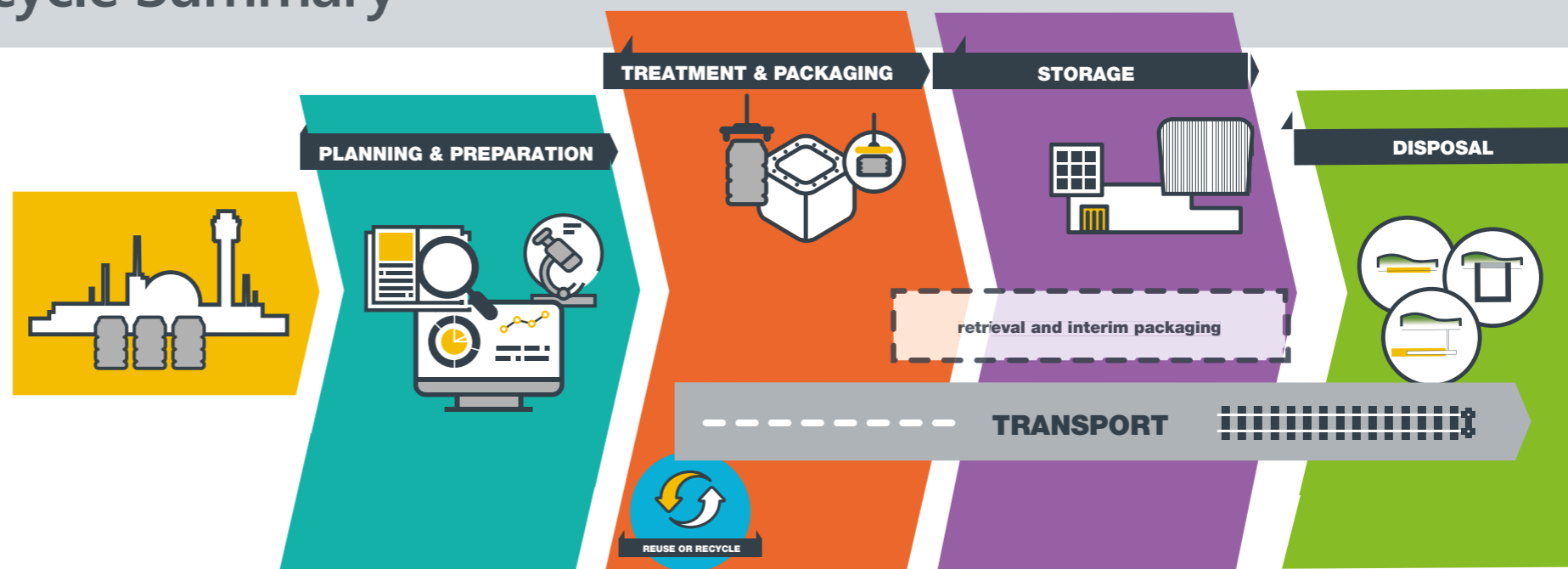
Integrated Waste Management - Waste Management Lifecycle Summary

This page introduces the Waste Management Lifecycle. The summary compliments the Integrated Waste Management pages which are split by waste hierarchy and should be read in conjunction with these pages.

The Waste Management Lifecycle (SO26-39)

Waste management on our sites is changing as our mission moves away from operations to decommissioning, site remediation (see **Site Decommissioning and Remediation**) and safe and secure management of those wastes that require interim storage. This means we will generate larger volumes of lower activity radioactive and non-radioactive wastes, with an associated increase in opportunities for waste minimisation,

reuse and recycling. We expect our Site Licence Companies (SLCs) to apply the Waste Hierarchy and we challenge them to ensure they derive as much value as practicable from the waste management system and appropriately manage the environmental impacts. However, we need to ensure that retrievals of legacy wastes (SO31) are managed promptly and effectively pending the availability of disposal routes.



STRATEGIC OUTCOMES - steps to achieving our mission	
WASTE PRODUCED	
26	All LLW produced
30	All ILW produced
31	All legacy waste retrieved
35	All HLW produced
WASTE TREATED	
27	All LLW treated - to enable diversion or reuse
32	All ILW treated
36	All HLW treated
WASTE STORED	
33	All ILW in interim storage
37	All HLW in interim storage
WASTE DISPOSED	
28	All waste suitable for disposal in NDA facilities
29	All waste suitable for permitted landfill disposed
34	All ILW disposed - final disposal operational
38	All overseas HLW exported
39	All HLW disposed - final disposal operational

WASTE MANAGEMENT LIFECYCLE				
	WASTE PRODUCED	WASTE TREATED	WASTE STORED	WASTE DISPOSED
WASTE HIERARCHY	26 All LLW produced 8% 323,000m ³ 2127	27 All LLW treated - to enable diversion or reuse 9% *69,000m ³ 2127 <small>*Not all LLW can be treated to enable diversion and the balance is disposed</small>	Disposal facilities available for LLW so interim storage not required	28 All waste suitable for disposal in NDA facilities 16% 49,000m ³ 2127 29 All waste suitable for permitted landfill disposal 5% 144,000m ³ 2127
	30 All ILW produced 33% 55,000m ³ 2120 31 All legacy waste retrieved 9% 1,900m ³ 2060	32 All ILW treated 10% 19,000m ³ 2120	33 All ILW in interim storage 15% 57,000m ³ 2120	34 All ILW disposed - final disposal operational 0% 0m ³ 2314
	35 All HLW produced 60% 2,750m ³ 2039	36 All HLW treated 72% 542m ³ 2039	37 All HLW in interim storage 81% 1,220m ³ 2039	38 All overseas HLW exported 51% 180m ³ 2029 39 All HLW disposed - final disposal operational 0% 0m ³ 2104
TOTALS	9% 382,650m ³	10% 88,542m ³	16% 58,220m ³	5% 193,180m ³



Site Decommissioning and Remediation

Buildings (radioactive)		Land (ha)	
Lifetime stock	1,192	Opening stock	1,043ha
Planned new builds	110	Land de-designated/reused	93ha
Total	1,302	Still to be de-designated/reused	950ha
		Total	1,043ha

OBJECTIVE

To decommission and remediate our designated sites, and release them for other uses - *Strategy 2021, p26*

WHAT IS SITE DECOMMISSIONING AND REMEDIATION?

The NDA is responsible for the cleaning up of each site safely and cost-effectively so that land can be released for other uses. This requires all facilities to be decommissioned and the land remediated, including, where appropriate, the removal of wastes and demolition of structures.

WHAT HAS TO BE DONE?

The NDA defines the final condition for each site including any remaining structures, infrastructure such as roads or services and the land itself, and must ensure the preferred decommissioning strategies, in terms of the pace and timing of work, balance the benefits and detriments of each option so that the greatest net benefit is delivered. This influences future plans and near-term work targets, and shapes current activities.

WHAT HAS HAPPENED SINCE 2005?

Some structures have already been dismantled and demolished, and land released. The NDA is assessing alternatives for the final stages of decommissioning, earlier release of land and the potential for future employment opportunities when sites are released.

WHAT HAS TO HAPPEN NEXT?

In response to government's proposal to amend primary legislation and enable more streamlined regulation during the final stages of decommissioning, the NDA is working with regulators, SLCs and other stakeholders on the optimal end state for each site. The NDA is also working with local authorities on their development plans, to ensure proposed end states and development plans are aligned.



STRATEGIC OUTCOMES - steps to achieving our mission

OPERATIONAL AND PLANNED

- 40 All planned new buildings operational
- 41 All buildings primary function completed

	Progress up to 2023	End date	Completed	Mission End
40	TBD	2090		BUILDINGS COMPLETED
41	39%	2127		

DECOMMISSIONING AND DEMOLITION

- 42 All buildings decommissioned
- 43 All buildings demolished or reused

42	22%	2131		DECOMMISSIONED AND DEMOLISHED OR REUSED
43	21%	2133		

SITES

- 44 All land delicensed or relicensed
- 45 All land in End State - all planned physical work complete
- 46 All land demonstrated as suitable for reuse
- 47 All land de-designated or reused

44	9%	2135		DEDESIGNATED OR REUSED
45	43%	2134		
46	9%	2135		
47	9%	2334		



Site Decommissioning and Remediation

To decommission and remediate our designated sites, and release them for other uses. *Strategy 2021, p26*

Buildings (radioactive)	
Lifetime stock	1,192
Planned new builds	110
Total	1,302

DECOMMISSIONING (radioactive buildings) - To deliver site end states as soon as reasonably practicable with a progressive reduction of risk and hazard. *Strategy 2021, p32*

Lifetime stock

NDA sites are making good progress decommissioning buildings that are no longer required, and a number of new builds are still required to deliver the mission.

STRATEGIC DECISION

Operational and planned (No.)

110 planned new builds	679 currently operational	513 completed primary function since 2005
----------------------------------	-------------------------------------	-----------------------------------------------------

39% COMPLETED PRIMARY FUNCTION

- 40 All planned new buildings operational by 2090
- 41 All buildings primary function completed by 2127

When a nuclear installation or facility is nearing the end of their operational life, a phase of work begins to transition it from operations to decommissioning. This phase normally starts well before operations finish and includes post operational clean out (POCO) which removes most of the nuclear inventory, such as fissile material. New facilities are still to be built to support the decommissioning mission, for example to package and temporarily store waste and ultimately, these will be decommissioned once their operational life is complete.

Decommissioning (No.)

513 total	41 in post operational clean out	53 in decommissioning (decontamination and dismantling)	134 decommissioning deferred	285 completed decommissioning since 2005
------------------	--------------------------------------------	-------------------------------------------------------------------	----------------------------------------	----------------------------------------------------

22% COMPLETED DECOMMISSIONING

- 42 All buildings decommissioned by 2131

In line with UK Government strategy, NDA preferred strategy is for nuclear facilities to be decommissioned immediately after cessation of operations. Sometimes however a decision might be taken to defer all or part of decommissioning in order to realise specific benefits such as radioactive decay or to manage a constraint (e.g. restricted access, a lack of waste management infrastructure or limited resources).

Demolition or reuse (No.)

285 total	17 available for demolition or reuse	1 in demolition	267 demolished or reused since 2005
------------------	------------------------------------------------	---------------------------	-----------------------------------------------

21% DEMOLISHED OR REUSED

- 43 All buildings demolished or reused by 2133

Decommissioning is the final phase in the asset lifecycle where dismantling is completed to an agreed end state. The final stages of dismantling include demolition which is dominated by non-nuclear risks. Deconstruction typically generates large volumes of waste, a proportion of which may be contaminated with radioactivity.

1,192
No. of radioactive buildings (not including new builds)

Inventory

Strategic Outcome



Demolition work at Dungeness



Demolition work at Harwell



Turbine hall demolitions



Site Decommissioning and Remediation

To decommission and remediate our designated sites, and release them for other uses. *Strategy 2021, p26*

Land hectares (ha)	
Opening stock	1,043(ha)
Land de-designated/reused	93(ha)
Still to be de-designated/reused	950(ha)
Total	1,043(ha)

LAND QUALITY MANAGEMENT AND LAND USE (sites) - To optimise the reuse of NDA sites. Strategy 2021, p44

Opening stock 2005

The NDA Mission is not complete until all Designated Directions associated with the land have been removed. Since 2005 we have completed 9% of the mission.

MISSION END

Licensing status of land

	(ha)		(ha)		(ha)
	938	93	1,031		
total licensed land		total de/relicensed land		total	

9% LAND DELICENSED SINCE 2005

44 All land delicensed or relicensed by 2135

Land quality management

(assessment)			(delivery)					
	(ha)						(ha)	
524	507	1,031	579	5	354	93	1,031	
land to be characterised	land characterisation complete	total	awaiting remediation	physical work in progress	all physical work complete	land demonstrated as suitable for reuse	total	

49% LAND WHERE CHARACTERISATION IS COMPLETE SINCE 2005

43% LAND WHERE PHYSICAL WORK IS COMPLETE SINCE 2005

9% LAND DEMONSTRATED AS SUITABLE FOR REUSE SINCE 2005

45 All land in End State - all planned physical work complete by 2134

46 All land demonstrated as suitable for reuse by 2135

Dedesignated or reused land

	(ha)		(ha)		(ha)
	93	0	950		
total land de-designated		total land reused		total still to be de-designated or reuse	

9% COMPLETE

47 All land dedesignated or reused by 2334

1,043* hectares (ha)
1,031 licensed & designated
12 Dounreay LLW facility

Inventory

Strategic Outcome

*The 1,043 hectares of land consists of 1,031 hectares of licensed and designated land and 12 hectares of land adjacent to the Dounreay nuclear licensed site that is used for the Dounreay LLW facility. Once all LLW has been removed from the Dounreay site the vaults will be sealed and the surface restored. The LLW facility site will then be monitored for 300 years, by which time 95% of the radioactivity will have decayed.

Each NDA site operates under a nuclear site licence granted to the relevant Site Licence Company (SLC) by the Office for Nuclear Regulation (ONR). The site or part of the site needs to have regulatory controls removed – delicensed – before land can be de-designated.

The NDA continues to support UK Government's plans to amend the legislative framework that applies to nuclear sites which will enable more proportionate regulation during the latter stages of dismantling. The amendments will enable site operators to optimise end states on a site by site basis. With this in mind, the NDA is working with regulators, SLCs and other stakeholders on the optimal end state for each site. The NDA is also working with local authorities to ensure that site end states and statements on the next planned use of sites are consistent with local waste and development plans.

In 2005, the NDA was given responsibility for land, under a 'designating' order by the Secretary of State. 'De-designating' this order signifies that the NDA's mission is complete. Parts of Berkeley are now a college campus while land at Harwell and Winfrith has been developed as business parks. The last land to be de-designated was three hectares at Winfrith in Feb 2019.



Bradwell in care and maintenance



Harwell



Winfrith